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\*\*\* PROCEDURALS \*\*\*

A-Spec 1NC

A. Interpretation and violation – the aff must specify which of the 3 branches of the federal government passes the plan

B. Violation – they specify the ­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_

C. This is a voter for Competitive equity

1. Ground – We lose agent specific counter plans and Disads

2. Conditionality – ‘resolved’ means “a firm course of action” - That’s the American Heritage dictionary – not specifying allows 2AC clarification which decks predictability – and means they are not topical

3. No solvency – no such actor as the united states federal government, only specific branches

A-Spec 2NC

90% of policy education comes from debates about implementation

Elmore ’80 (Prof. Public Affairs at University of Washington, PolySci Quarterly 79-80, p. 605)

The emergence of implementation as a subject for policy analysis coincides closely with the discovery by policy analysts that decisions are not self-executing. Analysis of policy choices matter very little if the mechanism for implementing those choices is poorly understood in answering the question, "What percentage of the work of achieving a desired governmental action is done when the preferred analytic alternative has been identified?" Allison estimated that in the normal case, it was about 10 percent, leaving the remaining 90 percent in the realm of implementation.

No Solvency - The USFG does not exist

Brovero ’94 (Adrienne, Debate Coach, Immigration Policies, <http://www.wfu.edu/Student-organizations/debate/MiscSites/DRGArticles/Brovero1994Immigration.htm>)

The problem is not that there is not a plan; this time there is one. The problem is that there is no agent specified. The federal government does not enact policies, agents or agencies within the federal government enact policies. The agent enacting a policy is a very important aspect of the policy. For some of the same reasons the affirmative team should specify a plan of action, the affirmative team should specify an agent of action.

O-spec 1NC

A. Interpretation and violation – the Aff must defend all three branches of the federal government – they don’t -- they specify their agent

We have definitional support – ‘the’ is a mass noun

American Heritage ‘2K

Used before a singular noun indicating that the noun is generic: The wolf is an endangered species.

B. Vote negative –

1. Crushes neg ground – allows them to specify down to tiny, unpredictable agents that we won’t be prepared to debate and they can strategically change

2. Extra-topical – allows them to claim specific agent advantages that go beyond the scope of the topic. Extra-topicality is voting issue because it proves the resolution insufficient and is a no-cost burden for the Aff.

Extra T Discourse 1NC

A) Interpretation:

The advantages have to stem from the passage of plan through the USFG – any other advocacy is extra-topical

B) Violation:

The affirmative garners advantages from their presentation of the affirmative, not just from the hypothetical passage of the plan.

C) Reasons To Prefer:

1. Predictability: Affirmatives that generate offense from their advocacy outside of the plan explode the topic because there is an infinite number of things that they could advocate that are tangentially related to the topic – Affirmatives could stand up and read movie scripts that barely relate to the topic, and negatives would never be able to predict them.

2. Bi-directionality: Our interpretation forces affirmatives to affirm the passage of the plan which means that we would have stable ground like USFG action is bad and USFG authority is good. Affs like this remove that guarantee and allow affirmatives that are wholly critical of the topic. This at least doubles the amount of research that negatives would have to do and decreases the chance that we will get any topic education.

3. Extra-Topicality is bad: It allows affirmatives to spike out of links and counterplans. It gives affirmatives advantages that they would otherwise not have. It disproves the resolution because it shows that it is not sufficient for the advantages. And, any increased ground that we get is unpredictable and undebatable.

D) Voting Issue for Fairness and Ground

\*\*\* SUBSTANTIALLY \*\*\*

Substantial = 20% 1NC

A. Interpretation: Substantial increase in space funding is 20%.

Space Studies Board, ’94 (A Space Physics Paradox: Why Has Increased Funding Been Accompanied by Decreased Effectiveness in the Conduct of Space Physics Research? (1994) Board on Atmospheric Sciences and Climate (BASC), <http://www.nap.edu/openbook.php?record_id=4792&page=19>

A Space Physics Paradox: Why has Increased Funding Been Accompanied by Decreased Effectiveness in the Conduct of Space Physics Research? TABLE 3.1 Summary of the Percentage Growth in Constant-Year Dollar Funding of Various U.S. Research Elements Element Constant-Year Dollar Growth, 1981-1989 (%) Federally funded research (FFR) 30 FFR basic 55 FFR in universities 55 NASA basic 100 NSF 30 NASA/OSSA with flight projects 60 NASA/OSSA without flight projects 45 Seven-university sample (funded by NASA/OSSA) 20-40 Funding for NASA's Office of Space Science and Applications (OSSA) includes substantial amounts for project-related activities. As these activities often include substantial support for industry, they were removed from the university funding estimates to obtain a lower limit to that funding, and the result is shown in Table 3.1, where funding growth, with and without projects, is given. An illustration of these research funding trends can be found in data from seven universities receiving NASA/OSSA funds over the 1981-1989 period. Funding changes ranged from a 35 percent decrease to a 245 percent increase, with an average value of 40 percent growth, as shown in Table 3.1. If the possibly anomalous 245 percent increase is removed from the sample, the average growth would be **20 percent**. Although the sample is small and the growth experienced from university to university varied widely, it does appear that the average growth in NASA/OSSA funding in space physics fields at these seven universities has been consistent with the national trend in research funding. In summary, we conclude that research funding in the United States, both generally and in the field of space physics, has increased **substantially** over the past 10 to 15 years.

B. Violation – the affirmative is a minor increase in exploration and/or development and doesn’t increase spending by 20% of NASA’s total budget.

C. Topicality is a Voter

1. Limits – allowing minor increases in space development allows countless variations of small affs like deploying one communication satellite. Space is already infinite and the inclusion of “and/or” makes preserving limits a prerequisite to having fair research burdens.

2. Negative ground – affirmatives with extremely low spending steals negative ground. Gives the ability to spike out of Spending DA and politics, which are the only lit-based reasons to reject space.

Substantial = 20% 2NC

Substantial increase is at least $2.6 billion per year.

Alexander, ‘8 (Amir, Professor of history, philosophy, and history of science at Stanford, “President Signs NASA Authorization Bill” October 16th, 2008, <http://www.planetary.org/programs/projects/space_advocacy/20081016.html> 6-29-11]

On Wednesday, October 15, 2008, President Bush signed into law the NASA Authorization Bill passed by Congress last month. By authorizing NASA to spend $20.21 billion in fiscal year 2009, the bill represents a substantial increase of $2.6 billion over the administration's budget request for NASA earlier this year. $4.9 billion of the bill's total is directed towards science operations, and another $4.9 billion is authorized for exploration. An authorization bill, unlike an appropriations bill, does not actually fund programs, and the spending levels it cites are not binding on NASA. Nevertheless it does provide the agency with spending guidelines and indicates Congress's priorities.

NASA’s budget is $18.7 billion.

Weaver, ’11(Daniel, NASA Associate Administrator for the Office of Communications, 2011 [Daniel S., NASA Announces Fiscal Year 2012 Budget, February 14th, 6-27-11, <http://www.nasa.gov/home/hqnews/2011/feb/HQ_11-041_NASA_Budget.html>]

WASHINGTON -- NASA announced Monday an $18.7 billion budget request for fiscal year 2012 that supports a reinvigorated path of innovation, technological development and scientific discovery. The budget supports all elements of NASA's 2010 Authorization Act, which was passed by a strong bipartisan majority of Congress and signed into law by President Obama. "This budget requires us to live within our means so we can invest in our future," NASA Administrator Charles Bolden said. "It maintains our commitment to human spaceflight and provides for strong programs to continue the outstanding science, aeronautics research and education needed to win the future." The NASA budget includes $4.3 billion for the Space Shuttle and International Space Station programs, $5 billion for science, $3.9 billion for future exploration systems and $569 million for aeronautics research. "This budget demonstrates the administration's commitment to maintaining NASA's leadership role in space," Deputy Administrator Lori Garver said. "It puts us on a path to out-innovate, out-educate and out-build the rest of the world." The budget supports the transition of the space shuttle program's workforce and facilities when the fleet retires this year after 30 years of service. Among the program's many historic accomplishments is the construction of the International Space Station. The station will operate until at least 2020, allowing NASA to fully use it as a technology test-bed and national laboratory for human health research. While continuing to work with its international partners on station activities, NASA will select a non-profit organization to stimulate, develop and manage research activities on the U.S. portion of the station. NASA has prioritized funding for its partnership with the commercial space industry to facilitate crew and cargo transport to the station. Companies will innovate to provide safe, reliable and cost effective access to low Earth orbit. NASA also will invest in the flight systems to take humans beyond low Earth orbit, including a deep space capsule and heavy lift rocket, and key research and technology to enable the long journeys. NASA's science budget supports new missions and continued operations of the many observatories successfully studying Earth and space. The agency will launch the Mars Science Laboratory in fiscal year 2012 and continue work on a wide range of astrophysics, heliophysics and Earth science missions. The 2012 budget request continues NASA's commitment to enhancing aviation safety and airspace efficiency, and reducing the environmental impact of aviation. NASA also remains dedicated to developing the next generation of technology leaders through vital programs in science, technology, engineering and mathematics. "We had to make some tough choices, but the budget gives us a plan for sustainable and affordable exploration," said NASA's Chief Financial Officer Elizabeth Robinson. "We're looking at new ways of doing business that improve program management and delivers even greater results to the American taxpayers."

A2: Substantially is Arbitrary

Substantially must be given meaning even if arbitrary – contextual uses are key

Devinsky, 02(Paul, IP UPDATE, VOLUME 5, NO. 11, NOVEMBER 2002, “Is Claim "Substantially" Definite?  Ask Person of Skill in the Art”, http://www.mwe.com/index.cfm/fuseaction/publications.nldetail/object\_id/c2c73bdb-9b1a-42bf-a2b7-075812dc0e2d.cfm)

In reversing a summary judgment of invalidity, the U.S. Court of Appeals for the Federal Circuit found that the district court, by failing to look beyond the intrinsic claim construction evidence to consider what a person of skill in the art would understand in a "technologic context," erroneously concluded the term "substantially" made a claim fatally indefinite.  Verve, LLC v. Crane Cams, Inc., Case No. 01-1417 (Fed. Cir. November 14, 2002). The patent in suit related to an improved push rod for an internal combustion engine.  The patent claims a hollow push rod whose overall diameter is larger at the middle than at the ends and has "substantially constant wall thickness" throughout the rod and rounded seats at the tips.  The district court found that the expression "substantially constant wall thickness" was not supported in the specification and prosecution history by a sufficiently clear definition of "substantially" and was, therefore, indefinite.  The district court recognized that the use of the term "substantially" may be definite in some cases but ruled that in this case it was indefinite because it was not further defined. The Federal Circuit reversed, concluding that the district court erred in requiring that the meaning of the term "substantially" in a particular "technologic context" be found solely in intrinsic evidence:  "While reference to intrinsic evidence is primary in interpreting claims, the criterion is the meaning of words as they would be understood by persons in the field of the invention."  Thus, the Federal Circuit instructed that "resolution of any ambiguity arising from the claims and specification may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention."  The Federal Circuit remanded the case to the district court with instruction that "[t]he question is not whether the word 'substantially' has a fixed meaning as applied to 'constant wall thickness,' but how the phrase would be understood by persons experienced in this field of mechanics, upon reading the patent documents."

Substantially = W/ Out Mat Quals 1NC

A. Interpretation -- Substantially means “without material qualification”

Blacks Law Dictionary 1990

B. Violation – the aff qualifies their plan --- the only act toward \_\_\_\_\_\_\_\_\_\_\_.

C. Prefer our interpretation –

1. Limits – the Aff can target thousands of technologies for space development and/or explore any facet of deep space, exploding the Negative research burden.

2. Core Ground – acting toward the entire unqualified topic area is key generate enough link magnitude for generic negative arguments to be able to outweigh the case.

D. Topicality is voting issue for fairness and education

\*\*\* INCREASE \*\*\*

Increase = Pre-existing 1NC

A. Interpretation - Increase implies pre-existence

Webster’s ‘98

Increase: to make greater, argument, implies to what is already well grown, or well developed

B. Violation - the Aff creates a new space exploration or development strategy.

C. It’s a voting issue

1. Limits – Allowing new forms of exploration and development delimits the topic – this decks negative predictability, which hurts education.

2. Ground - There is little literature on new technologies and most discussions of space are only hypothetical – core negative ground is critical to education

More evidence.

Increase requires evidence of pre-existing condition

Buckley et al, 06 - attorney (Jeremiah, Amicus Curiae Brief, Safeco Ins. Co. of America et al v. Charles Burr et al,

<http://supreme.lp.findlaw.com/supreme_court/briefs/06-84/06-84.mer.ami.mica.pdf>)

First, the court said that the ordinary meaning of the word “increase” is “to make something greater,” which it

believed should not “be limited to cases in which a company raises the rate that an individual has previously been charged.” 435 F.3d at 1091. Yet the definition offered by the Ninth Circuit compels the opposite conclusion. **Because** “increase” means “to make something greater,” there must necessarily have been an existing premium, to which Edo’s actual premium may be compared, to determine whether an “increase” occurred. Congress could have provided that “adverse action” in the insurance context means charging an

amount greater than the optimal premium, but instead chose to define adverse action in terms of an “increase.” That definitional choice must be respected, not ignored. See *Colautti v. Franklin*, 439 U.S. 379, 392-93 n.10 (1979) **(“[a] definition which declares what a term ‘means’ . . . excludes any meaning that is not stated**”). Next, the Ninth Circuit reasoned that because the Insurance Prong includes the words “existing or applied for,” Congress intended that an “increase in any charge” for insurance must “apply to all insurance transactions – from an initial policy of insurance to a renewal of a long-held policy.” 435 F.3d at 1091. This interpretation reads the words “existing or applied for” in isolation. Other types of adverse action described in the Insurance Prong apply only to situations where a consumer had an existing policy of insurance, such as a “cancellation,” “reduction,” or “change” in insurance. Each of these forms of adverse action presupposes an already-existing policy, **and under usual canons of statutory construction the term “**increase” also should be construed to apply to increases of an already-existing policy**.**  See Hibbs v. Winn, 542 U.S. 88, 101 (2004) (“a phrase gathers meaning from the words around it”) (citation omitted).

\*\*\* ITS \*\*\*

Its ≠ Private Sector 1NC

A. Interpretation: Its implies ownership

Glossary of English Grammar Terms, 2005 (http://www.usingenglish.com/glossary/possessive-pronoun.html)

Mine, yours, his, hers, its, ours, theirs are the possessive pronouns used to substitute a noun and to show possession or ownership. EG. This is your disk and that's mine. (Mine substitutes the word disk and shows that it belongs to me.)

B. Violation: The plan expands development by private companies

Example – Incentives for private actions aren’t topical.

C. Topicality is a Voting Issues

1. Predictability – No way predict presence not tied to the agent in the resolution. This invigorates topic precision and education on US foreign policy.

2. Ground – Political capital and legitimacy disads depend on a possessive connection to the United States. It explodes the research burden to include anything dealing with space and destroys the private actor CP.

\*\*\* EXPLORATION \*\*\*

Exploration = Physical Destination 1NC

A. Interpretation: “Exploration” must have a specific and physical destination.

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 240)

So far, this essay has pointed out the range of meanings attached to exploration, a term so conceptually broad that it would seem to admit anyone with a geographical goal and a good pair of shoes. But exploration has hidden assumptions that restrict its meaning. For example, the objectives of the VSE involve traveling to places distinguished by land and landforms (e.g. Moon-to-Mars, and perhaps to Near-Earth Objects--NEOs) rather than to points in space. In this focus on rocky places, NASA is following in a long tradition of exploration. Renaissance voyagers during the ‘‘Age of Discovery’’ viewed other lands e Asia, Africa, and the Spice Islands e as the goal of their voyages. Oceans, on the other hand, were treated as highways rather than habitats, a medium to traverse rather than to be investigated. Only in the 19th century did this change, as deep-sea exploration came of age. Yet even then many of these sea expeditions focused on the ocean floor rather than the watery world that covered it [24]. Twentieth century explorers have expressed this ‘‘land bias’’ too. When Frederick Cook and Robert Peary returned from their North Pole expeditions in 1909, their photos represented the North Pole, a geographical point in the middle of the polar sea, as a towering hummock of ice. Yet neither man had navigational equipment precise enough to determine the location of the North Pole so exactly. Nevertheless, both men saw fit to plant their flag on the tallest, ‘‘rockiest’’ mound of ice in the vicinity (see Fig. 2). (Note – “VSE” = “Vision for Space Exploration”, a National Security Presidential Directive issued in 2004)

B. Violation: The plan only increases general exploration or research and doesn’t have a physical, land-based target in mind. To be topical the plan must specify the destination.

Example – Moon and/or Mars are topical; Deep Space & Telescopes are not.

C. Topicality is Voter

1. Predictable ground – general exploration allows the aff to reinterpret the purpose and goals of the aff. This guts specific links and stable neg CP ground.

2. Education – physical areas encourage a focus on concrete proposals. It’s impossible to internalize knowledge on abstract exploration.

Exploration = Physical Destination 2NC

Space exploration must include physical craft – no ground based

Columbia Encyclopedia 8

"space exploration." The Columbia Encyclopedia, Sixth Edition. 2008. Encyclopedia.com. 9 May. 2011 <http://www.encyclopedia.com>.

<http://www.encyclopedia.com/topic/space_exploration.aspx>

With over 51,000 entries The Columbia Encyclopedia (Sixth Edition) is an authoritative and exhaustive reference guide. Each entry is thorough and clear, the result of over 200 editors and academic advisors striving for depth and accuracy in the oldest, most venerable English language encyclopedia in the world. space exploration the investigation of physical conditions in space and on stars, planets, and other celestial bodies through the use of artificial satellites (spacecraft that orbit the earth), space probes (spacecraft that pass through the solar system and that may or may not orbit another celestial body), and spacecraft with human crews. Satellites and Probes Although studies from earth using optical and radio telescopes had accumulated much data on the nature of celestial bodies, it was not until after World War II that the development of powerful rockets made direct space exploration a technological possibility. The first artificial satellite, Sputnik I, was launched by the USSR (now Russia) on Oct. 4, 1957, and spurred the dormant U.S. program into action, leading to an international competition popularly known as the "space race." Explorer I, the first American satellite, was launched on Jan. 31, 1958. Although earth-orbiting satellites have by far accounted for the great majority of launches in the space program, even more information on the moon, other planets, and the sun has been acquired by space probes.

More evidence.

Faith, ‘9 (“ Giving NASA a clear mission “ G. Ryan Faith is an adjunct fellow at the Center for Strategic and International Studies (CSIS). 8/31/9

<http://www.thespacereview.com/article/1456/1>

Giving NASA a clear mission If neither technology-oriented nor destination-oriented objectives seem able to provide a sense of direction to guide the nation’s efforts in space, then what can? To approach this question, it is useful to ask why President Kennedy’s challenge to go to the Moon was so effective in providing NASA with leadership. The critical element of this challenge that, although never explicit, was so important to NASA’s health and growth during this period was the transformation—at least in fact, if not in law—into an exploration agency. If we wish to see NASA act effectively as a space exploration agency, then the most direct way to do this is to amend the Space Act to explicitly task the agency with the job of space exploration. However, before we do so, we must define what space exploration actually is. Space exploration is the expansion of human influence in space**.**  This definition of exploration is inherently one of capacity building. Human influence in space is a measure of our ability to do useful things beyond the Earth’s surface. In order to do something useful, there has to be some sort of human presence, either humans themselves or their robotic proxies. Once some measure of human influence has been established at some destination in space, there are two ways a space exploration agency can expand that influence. One, the agency can decrease the costs and increase the benefits of human influence at a given location until such influence becomes sufficiently useful that it is economically self-sustaining, at which point continued use of agency resources is unnecessary. Alternately, human influence can be extended to some new place that may in future become home to some form of self-supporting human influence. The key element is that such a mandate compels each step to build on past accomplishments and lay the groundwork for future missions.

Human presence crucial to exploration.

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 240)

Yet, for others, humans remain vital to a modern vision of exploration. According to Planetary Society Executive Director Lou Friedman, exploration has to involve risk in distant places. Or, as he puts it, “Exploration” = “Adventure” + “Discovery”. To him, **astronomy with telescopes is perhaps not a form of exploration at all.**

Best limits define space exploration as human travel on a craft

Corking, ‘6 (Founder and Principal Corking Project Corking Project Limited is an independent project management business. We deliver excellence in IT and robotic system integration for ambitious clients, including manufacturers and distributors. 2/10/6, <http://www.ecademy.com/module.php?mod=club&t=401626>

By the way - we haven't had a "what is exploration?" thread yet either. I have quietly been defining it as exploration by travelling on a spacecraft. I personally have not been using the wider definition of exploration with telescopes, space telescopes or radio telescopes.

Exploration = Outward 1NC

A. Interpretation: Exploration must have an outward focus

Vega Space, ‘11 (“Space Exploration”, <http://www.vegaspace.com/newsroom/in_focus/space_exploration.aspx>)

What is Space exploration?

Space exploration missions are about looking **outward** from Earth towards the Sun, other planets the universe and beyond. Mission objectives include seeking to shed light on the evolution of our solar system, our place in the universe, what the future may hold and the origins of life.

The preposition “of” is distinct from “in.”

Gorove, ‘73 (Chairman of the Graduate Program of the School of Law and Professor of Law, University ofMississippi School of Law., Copyright 1973, Journal of Space Law - University, Mississippi 38677; [No. t Spring 1973, pp. 1-104; No.2, Fall 1973, pp. 105-208, <http://www.spacelaw.olemiss.edu/JSL/Back_issues/JSL%201.pdf>)

Similarly, it may be noted that freedom of scientific investigation "in" outer space which is guaranteed by the last paragraph of Article-I of the Outer Space Treaty would be applicable to a scientific investigation of the earth despite the fact the earth cannot be regarded under the nomenclature used in the Treaty as a part of outer space. This line of reasoning may find support in -the clear-cut wording -of the Treaty which speaks about scientific investigation "in" outer space rather than scientific investigation "of" outer space.

B. Violation: The plan may create something in space, but the research and exploration is directed towards the Earth.

Example – Weather monitoring isn’t topical.

C. Topicality is Voter

1. Directional Ground – Access to cooperation and relations disads depend on outward space development. The aff spikes out of core space ground and encourages bidirectional plan mechanisms that make it impossible to be neg.

2. Limits – including inward focused plans doubles the topic and multiplies the possible advantage areas that aff can claim. This is unpredictable and explodes our research burden.

3. Education – the topic call for space based education. The aff encourages recycled warming advantages and earth science related education.

Exploration = Outward 2NC

Earth science activities are distinct from space exploration and development

Spitzl, ‘99 (Helmut, Space Expert – European Commission, “Out of the Cradle – Chapter 2”, <http://neptune.spaceports.com/~helmut/exploration99/strategy1/2_1_1_current_space_strategies.html>)

NASA divides its space strategy into four sections dubbed the 'Four Strategic Enterprises':

1. Space Science Enterprise   
2. Earth Science Enterprise   
3. Aeronautics and Space Technology Enterprise   
4. Human Exploration and Development of Space Enterprise

The mission of the Space Science Enterprise is to solve the mysteries of the universe, explore the solar system; discover planets around other stars; search for life beyond Earth from origins to its destiny; and chart the evolution of the universe in order to understand its galaxies, stars, planets, and life. As a visible link to future human exploration beyond Earth orbit, Space Science Enterprise robotic missions will help develop the scientific knowledge required for these ventures. At the same time, the Space Science Enterprises will benefit from the opportunities human exploration offers in conducting scientific research that stretches beyond the capabilities of robotic systems. NASA's Earth Science Enterprise, the Mission to Planet Earth is dedicated to understanding the Earth's environmental system and the effects of natural and human-induced changes on the global environment.

The mission of the Aerospace Technology Enterprise is to pioneer the identification, development, verification, transfer, application, and commercialization of high-payoff aeronautical and space transportation technologies. Finally, the mission of the Human Exploration and Development of Space Enterprise (HEDS) is to open the space frontier by exploring and to expand the human experience into the far reaches of space. The Space Shuttle and International Space Station (ISS) serve as research platforms to pave the way for sustained human presence in space through critical research on human adaptation.

Exploration = Human Travel 1NC

A. Interpretation: Exploration must include human space travel.

Wright, ‘8 (Edward, Project Manager – Teachers in Space, Former President – X-Rocket, LLC, and Programming Writer – Microsoft Corporation, Comment on “A Move Against ‘Mars Mission Funding’”, Space Politics, 6-28, <http://www.spacepolitics.com/2006/06/28/a-move-against-mars-mission-funding/>)

> No it doesn’t, the article showed democratic support for further unmanned mars missions?

**Unmanned missions are not exploration**, they are merely reconnaissance. The dictionary defines exploration as “travel for purposes of discovery.” Sitting in a control room looking at pictures of Mars on a TV set is not exploration because it does not involve travel. Calling unmanned space “exploration” and unmanned probes “spaceships” is just an attempt to co-opt the language. Mark further confuses the issue by defined “space exploration” to mean only missions conducted by NASA, ignoring the fact that the private sector is also working on space exploration.

And, even if “exploration” can include robots, it must also have a human component

Ehrenfreud, ‘10 (P., Space Policy Institute – George Washington University, et al., “Cross-Cultural Management Supporting Global Space Exploration”, [Acta Astronautica](http://www.sciencedirect.com/science/journal/00945765), 66(1-2), January-February, p. 245)

1 The European Space Agency ESA defines exploration as the ``travel through [and to] an unfamiliar area in order to learn about it'' and space exploration as ``extending access and a sustainable presence for humans in the Earth–Moon–Mars space, including the Lagrangian points and near-Earth objects'' [1]. In this paper we adopt this definition of space exploration to explore robotically and later with humans neighboring planets and small bodies of our solar system.

B. Violation: The plan only increases the use of robots and machine technologies. To be topical the aff must include a human component.

Example: Telescopes and probes aren’t topical.

C. Topicality is Voter

1. Ground – The best literature discusses the relative possibility and desirability of having humans in space. The aff excludes this ground.

2. Limits – it’s a huge topic compounded by an and/or construction – colonies focus restores debate to the crucial long-term debate over exploration.

3. Precision – Our interpretation preserves the distinction between exploration and ‘reconnaissance’ which means we are closer to the framer’s intent which is get to targeted topic education.

Exploration = Human Travel 2NC

Including unmanned missions slay precision

Wright, ‘6(Edward, Investigator on NASA K-12 Cooperative Agreement Notice to create professional-development workshops for STEM teachers focusing on suborbital science, flight simulation, space medicine and human factors. Developed legislative strategy and led lobbying efforts on Capitol Hill. <http://www.spacepolitics.com/2006/06/28/a-move-against-mars-mission-funding/>, 6/28/6

Unmanned missions are not exploration, they are merely reconnaissance. The dictionary defines exploration as “travel for purposes of discovery.” Sitting in a control room looking at pictures of Mars on a TV set is not exploration because it does not involve travel. Calling unmanned space “exploration” and unmanned probes “spaceships” is just an attempt to co-opt the language.

Global exploration strategy is best definition because it’s an international consensus

Ehrenfreund and Peter, ‘9 (Space Policy Volume 25, Issue 4, November 2009, Pages 244-256, “ Toward a paradigm shift in managing future global space exploration endeavors”Ehrenfreund: Pascale Ehrenfreund, (Ph.D. Thesis University of Vienna/ University Paris VII)

International cooperation will be an important element of future space exploration activities. The result of the work between representatives of 14 space agencies is particularly noteworthy: in 2007, a report entitled “Global Exploration Strategy (GES) – The Framework for Cooperation” was released as the first product of an international coordination process among these agencies.1 The document defines space exploration as “a global, societal project driven by the goal to extend human presence in Earth-Moon-Mars space” [10] , The global exploration strategy: the framework for coordination http://esamultimedia.esa.int/docs/GES\_Framework\_final.pdf (2007) [GES 2007].[10].

Space exploration has to include human presence

Logsdon, ‘9 (Dr. Logsdon is Professor Emeritus of Political Science and International Affairs at George Washington University’s Elliott School of International Affairs. Prior to his leaving active faculty status in June 2008, he was on the faculty of the George Washington University for 38 years; before that he taught at the Catholic University of America for four years.<http://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/20100025875_2010028362.pdf>**)**

Many believe that the only sustainable rationale for a government-funded program of human spaceflight is to take the lead in exploring the solar system beyond low-Earth orbit.20 The MIT white paper provides an insightful definition of exploration: Exploration is **a human activity**, undertaken by certain cultures at certain times for particular reasons. It has components of national interest, scientific research, and technical innovation, but is defined by none of them. We define exploration as an expansion of the realm of human experience, bringing people into new places, situations, and environments, expanding and redefining what it means to be human. What is the role of Earth in human life? Is human life fundamentally tied to the earth, or could it survive without the planet? Human presence, and its attendant risk, turns a spaceflight into a story that is compelling to large numbers of people. Exploration also has a moral dimension because it is in effect a cultural conversation on the nature and meaning of human life. Exploration by this definition can only be accomplished by direct human presenceand may be deemed worthy of the risk of human life.21 In the wake of the 2003 Columbia accident that took the lives of seven astronauts and the report of the Columbia Accident Investigation Board that criticized the absence of a compelling mission for human spaceflight as “a failure of national leadership,”22 the United States, in January 2004, adopted a new policy to guide its human spaceflight activities. The policy directed NASA to “implement a sustained and affordable human and robotic program to explore the solar system and beyond” and to “extend human presence across the solar system, starting with a human return to the Moon by the year 2020, in preparation for human exploration of Mars and other destinations.”23 This policy seems totally consistent with the definition of exploration provided in the MIT white paper.

Exploration ≠ Deep Space 1NC

A. Interpretation: Exploration must be directed to accessible regions of space beyond the Earth’s orbit.

Curtis, ‘9 (Dr. Jeremy, Head of Education – UK Space Agency, et al., “Space Exploration Review”, British National Space Centre, December, <http://www.lpi.usra.edu/lunar/strategies/UKSpaceExporationReview2009.pdf>)

*2.4 What is space exploration?*

In the context of this report space exploration encompasses the region of the solar system that is **accessible** to human beings using currently feasible technology (or to reiterate the Global Exploration Strategy, 'Solar System destinations where humans may one day live and work'). This includes the Moon, Mars, certain Near Earth Objects (asteroids) and particular regions of space from Low Earth Orbit (LEO) through to the various libration points in the Earth-Moon and Earth-Sun systems. These latter locations have special properties and uses (see box on p22). **Excluded** from this definition of space exploration is the purely scientific exploration of the outer Solar System (since we cannot yet build space vehicles able to carry and protect astronauts on such voyages), as well as space-based observatories used to study the stars and universe beyond. Likewise unmanned satellites in Earth orbit are excluded – for example those providing Earth observation, communications and navigation services). Both robotic and human activities are included – exploration per se does not favour one over the other, though in many cases a combination of both is the best approach. Space exploration within this definition encompasses projects which may combine in varying degrees scientific, technological, cultural and economic goals. Example goals include science objectives such as the study of lunar geology to understand the history of the Earth; technology demonstrations, such as testing new communication techniques; and commercial projects such as the search for usable mineral resources on the Moon or Near Earth Objects.

B. Violation: The plan’s focus on the outer solar system is not accessible to current technology and is merely a study, not exploration.

Example – Scientific observation of deep space isn’t topical.

C. Topicality is Voter

1. Ground – If the plan’s isn’t based on current capabilities, there isn’t literature on it. No one writes on hypothetical deep space exploration. The aff erases this core ground.

2. Limits – Space is literally infinite and possible aff mechanisms are multiplied by the inclusion of and/or in the topic – limiting the debate to near earth objects preserves fair research burdens and predictable ground.

Exploration ≠ SETI 1NC

A. Interpretation: “Exploration” must have a specific and physical destination.

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 240)

So far, this essay has pointed out the range of meanings attached to exploration, a term so conceptually broad that it would seem to admit anyone with a geographical goal and a good pair of shoes. But exploration has hidden assumptions that restrict its meaning. For example, the objectives of the VSE involve traveling to places distinguished by land and landforms (e.g. Moon-to-Mars, and perhaps to Near-Earth Objects--NEOs) rather than to points in space. In this focus on rocky places, NASA is following in a long tradition of exploration. Renaissance voyagers during the ‘‘Age of Discovery’’ viewed other lands e Asia, Africa, and the Spice Islands e as the goal of their voyages.

B. Violation:

1. The plan only increases general research and analysis and doesn’t have a physical, land-based target in mind.

2. SETI is explicitly non-topical.

Lyall, ’98 (Professor of Public Law. Member IISL. University of Abderdeen, Acta Astronautica, Volume 42, Issues 10-12, May-June 1998, Pages 661-665)

Under the general concept of state sovereignty it is for a state to regulate what is done within its jurisdiction. On that basis it is for municipal law to determine the lawfulness of SETI activity, and, for its own purposes to regulate what is done. Passive SETI, if I may so call the simple reception and analysis of signals, could be classified as a matter lying wholly within the jurisdiction of a state. Can one argue that it is an activity in outer space, which is the gravamen of the UN treaties? I think not. However, one could say that it crawls into the international arrangements as being part of the “exploration” of space which is dealt with internationally. However, if that is the case then visual astronomy must also qualify. Certainly astronomy has an interest, for space debris, not to mention space art, can affect astronomers. I would not consider this enough to sweep astronomy into the activities subject to the Outer Space Treaty.

C. Topicality is a Voter

1. Predictable ground – general exploration allows the aff to reinterpret the purpose and goals of the aff. This guts specific links and stable neg CP ground.

2. Education – physical areas encourage a focus on concrete proposals. It’s impossible to internalize knowledge on abstract exploration.

3. Precision – Our interpretation preserves the distinction between exploration and ‘astronomy’, which means we are closer to the framer’s intent that is get to targeted topic education.

Exploration 2NC Boosters 1/

Their interpretation guts precision --- “space exploration” requires exacting contextual definitions --- generic definitions are facially absurd and far too broad to shape space policy

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 237)

The optimal strategy for US space exploration has recently been the subject of some decidedly revisionist thinking, manifested in the February 2008 workshop ‘‘Examining the Vision: Balancing Science and Exploration’’ sponsored by Stanford University and the Planetary Society [3]. Human space exploration was defined implicitly by the participants with an implementation plan e to wit ‘‘the purpose of sustained human exploration is to go to Mars and beyond’’. This, and also the view that science is a beneficiary of human space flight but is not its primary motivation, is consistent with the thinking of the Aldridge Commission. This consistency became a matter of revisionism here because, following the Aldridge Report with its broad set of science goals, the NASA exploration enterprise subsequently became narrowly focused on lunar return. While these statements provide context, they do little to advance our deeper understanding of exploration and its implications for space policy. The CAIB report defined Columbia’s astronauts as explorers even though the crew never left low-Earth orbit, a region traveled by hundreds of other astronauts prior to STS-107. In what sense then were they ‘‘pushing back . a frontier’’ as specified in the Aldridge Report? Or is the notion of exploration as travel to places never visited too limiting? After all, Sir Edmund Hillary and Tenzing Norgay’s ascent of Everest brought them to a place never visited, whereas Charles Darwin followed in the footsteps of hundreds of others when he made his world-changing discoveries in the Galapagos Islands. Does this make Hillary and Norgay explorers to the exclusion of Darwin? [4] Despite these ambiguities in meaning, it is still emphasized by many that the USA is a nation founded by explorers, and that, however troubling their legacy might be, those explorers have instilled in us a national ‘‘spirit of exploration’’. A discussion about the definition of ‘‘exploration’’ can, in principle, devolve into a comparison of dictionary definitions, and that is not very satisfying. Were we to do this, we would quickly find that the verb ‘‘explore’’ is defined (as per the Oxford English dictionary) as to: (1) travel through an unfamiliar area in order to learn about it; (2) inquire into or discuss in detail; and (3) examine by touch. Two of these would apply to human space flight. By these definitions, one might argue that exploration involves little more than walking into the woods a few hundred yards from home and planting tracks on a few square inches of ground that might never have been touched by human feet. This seems absurd, of course. Such definitions could even be rendered irrelevant by Chief Justice Potter Stewart’s ‘‘I know it when I see it’’ test (which he famously used to define obscenity) [5]. Such a test, in which exploration is defined at gut-level, seems endemic to practical modern views of space exploration. Yet it is an absurdity which makes the point clear: definitions offer little help in understanding the constellation of meanings which surround modern exploration [6]. These may seem like semantic questions, but there are perils which await the US space program if it chooses to base a program on exploration, and yet leaves the meaning of the word unexamined. As NASA moves from policy statements to implementation goals and mission metrics, the ambiguity of exploration continues to play out in debates over goals and outcomes. The question for NASA is not ‘‘What is the true meaning of exploration?’’ but rather ‘‘What kind of exploration should we pursue?’’ We do not presume to answer either question here but, rather, hope to prepare the way for the debate which must follow: first, by looking at the different meanings of exploration and their historical precedents; second, by examining some of the hidden assumptions in exploration policy and its implications for the VSE.

Exploration 2NC Boosters 2/

Our interpretation preserves precision and limits – we’ll isolate two impacts:

1. Loose interpretations and ambiguity on the meaning of exploration corrupt debates over space and gut effective policy-making strategies.

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 239)

3. The ‘‘insegreviousness’’ of exploration

That Americans have broadly embraced exploration as a part of their national identity seems clear. Yet, as the above examples show, this embrace provides little insight into the meanings of exploration, the effect of such meanings on the planning of missions, or the value of such missions to the nation. Why does such an important term as ‘‘exploration’’ retain such ambiguity? One finds many answers, but perhaps comedian Gary Owen explains it best. Certain words, Owen states, are ‘‘freedom words’’, terms with meanings broad enough to label things that would be hard to categorize. Like Owen’s made-up word ‘‘insegrevious’’, exploration has come to mean whatever its users want it to mean. In truth, the ambiguity of the term ‘‘exploration’’ has certain advantages, particularly from the perspective of funding and policy making. Because funding of NASA budgets requires broad agreement in Congress, the fuzziness of exploration often avoids triggering debates that would weaken political support. ‘‘In the political realm, it’s not desirable to have too precise a definition’’, according to Scott Hubbard, Stanford Professor of Engineering and Former Director of NASA Ames Research Center, with respect to exploration. Within this environment, explains Hubbard, defining exploration too narrowly ‘‘is not without some peril’’. Ian Pryke, Senior Fellow at George Mason University and Former Head of the European Space Agency’s Washington Office, speaks in similar terms about the word. ‘‘A little bit of constructive ambiguity never hurts.’’ [19]. Yet this ambiguity comes with a price. If it makes it easier to craft policy and pass space budgets, it makes later decisions, such as policy implementation and mission metrics, more difficult. Five years after the announcement of VSE and four years after the Exploration Systems Architecture Study (ESAS), broad disagreement remains about core concepts in US space exploration. While VSE and the reports detailing and extending it deserve praise for being visionary and ambitious, they have also ‘‘kicked the can down the road’’, delaying, rather than resolving, debates about the ultimate goals of space exploration.

2. A limited topic better translates to engagement and productive social activism.

Pilloton, ‘10 (Emily is the Founder and Executive Director of Project H Design. Trained in architecture at UC Berkeley and product design at the School of the Art Institute of Chicago, she started Project H to provide a conduit and catalyst for need-based product design that empowers individuals, communities, and economies, “Depth over Breadth: Designing for Impact Locally, and for the Long Haul,” Interactions, May/June)

I have never been one to sit still and focus on one thing. In fact, most designers are fairly ineffective when it comes to singular tasks - we seem to be both blessed and cursed with a unique form of attention deficit disorder in which we thrive under diverse and constant stimuli. And yet, after two years of tackling design projects for measurable social impact, the one piece of advice I would give to other designers who seek to apply their creative skills toward activism and community engagement is to sit still and focus on one thing. I mean this not in a cubicle context (”sit at your desk and return emails”), but rather as it pertains to approaching huge, high-stakes design for social-impact projects and enterprises. To sit still and focus on one thing means to commit to a place, to live and work there, and to apply your skills (your “one thing”) to that community’s benefit. In the past few years, we designers have acknowledged the imperatives of sustainability and design for the greater good, and responded by launching initiatives that are often rife with widespread cheerleading rather than deep, meaningful work.

\*\*\* DEVELOPMENT \*\*\*

Development = Physical 1NC

A. Interpretation: Development must include physical changes to outer space.

Gochenaur, ‘3 (Ross, AICP, Director, Zoning & Land Development Department) COLLIER COUNTY LAND DEVELOPMENT CODE STAFF CLARIFICATION ZONING & LAND DEVELOPMENT STAFF CLARIFICATION SC 03-003 http://www.colliergov.net/Modules/ShowDocument.aspx?documentid=27257

“Development” is defined by the LDC through reference to Florida Statute 380.04(1), which defines development as “…the carrying out of any building activity or mining operation…[and]…the making of any **material** change in the use or appearance of any structure or land…”

B. Violation: the plan does a new thing but doesn’t PHYSICALLY change space in a lasting way.

Example – SPS

C. Topicality is a Voter

1. Limits – development has to be meaningfully distinguished from “doing stuff in space” or the topic could include literally all and any space projects ever proposed

2. Predictable ground – general development allows the aff to reinterpret the purpose and goals of the aff. This guts specific links and stable neg CP ground.

Development = Physical 2NC

Development mandates physical conversion – this is the broad reading

Gilbert, ‘4(P.J., Judge, 2004 Cal. App. Unpub. LEXIS 8155, <http://www.lexisone.com/lx1/caselaw/freecaselaw?action=OCLGetCaseDetail&format=FULL&sourceID=bcddi&searchTerm=eEiT.gaYa.aadj.ebfL&searchFlag=y&l1loc=FCLOW>)

Penny argues the trial  [\*12]  court interpreted the ambiguous word "develop" against her in determining William did not develop the Calabasas property. Section 3.04 provides that in the event William shall "develop or construct" single family residences, the net profits would become community property. The court defined "develop" to mean "that the community would have an interest in the profits, if during the marriage, [William] successfully obtained all governmental approvals needed to construct single family residences in a commercially viable manner." Penny argues the agreement does not contain a "governmental approvals" limitation. Instead, she relies on dictionary definitions of "develop." She cites Webster's Third New International Dictionary (1986) at page 618, which defines "'develop'" to mean "'to convert (as raw land) into an area suitable for residential or business purposes' or 'to alter raw land into (an area suitable for building).'" Penny also cites Black's Law Dictionary (7th ed. 1999) at page 462, which defines "development" to mean, "'1. A human-created change to improved or unimproved real estate, including buildings or other structures . . . . 2. An activity, actions, or alteration that changes  [\*13]  undeveloped property into developed property.'"

Development = R&D 1NC

A. Interpretation: Development must include research and production activities for the purpose of space exploration.

SDPA, ‘5 (Space Development Promotion Act of the Republic of Korea, Journal of Space Law, 33, 5-31, <http://www.spacelaw.olemiss.edu/library/space/Korea/Laws/33jsl175.pdf>)

Article 2 (Definitions)

Definitions of terms used in this Act are as follows:

(a) The term “space development” means one of the following:

(i) Research and technology development activities related to design, production, launch, operation, etc. of space objects;

(ii) Use and exploration of outer space and activities to facilitate them;

(b) The term “space development project” means a project to promote space development or a project to pursue the development of education, technology, information, industry, etc. related to space development;

(c) The term “space object” means an object designed and manufactured for use in outer space, including a launch vehicle, a satellite, a space ship and their components;

(d) The term “space accident” means an occurrence of damage to life, body or property due to crash, collision or explosion of a space object or other situation;

(e) The term “satellite information” means image, voice, sound or data acquired by using a satellite, or in formation made of their combination, including processed or applied information.

B. Violation: the plan doesn’t include the production of any technology.

C. Topicality is a Voter

1. Limits – the space topic is infinite. Allowing the aff to “do anything” in space explodes our research burden. Requiring the aff to do R&D for exploration purposes limits the possible range of options.

2. Ground – requiring the aff to produce technology guarantees funding links and core neg ground because like private actor CPs.

Development ≠ Military 1NC

A. Interpretation: Development is creating hardware for peaceful purposes.

Hwang, ‘6 (Chin Young, Policy and International Relations Division – Korea Aerospace Research Institute, “Space Activities in Korea—History, Current Programs and Future Plans”, Space Policy, 22(3), August, p. 199)

Space development in Korea has several characteristics. First, space development activities are initiated by a scientific research institute, KARI, and a university, KAIST SaTRec, **for peaceful purposes**. Most development projects have been proposed by research institutes, not government decision makers. Second, most satellite missions are multipurpose. Since space development has not been initiated by the top levels of government, funding has to be sought by research institutes and MOST. In order to get enough funds, missions must be able to meet various requirements of related ministries. At the same time, each space development project has to justify its feasibility in terms of an economic cost–benefit analysis. Third, Korean space activities have been focused on hardware—development of satellites and launch vehicles—rather than on the development of a full vision and the missions that would accompany this. The national space development plan reflects these characteristics, even though it contains some mention of space science and manned missions to the ISS through the international cooperation program.

B. Violation: the plan expands military space technologies with offensive capabilities.

Example – Space Force isn’t topical.

C. Topicality is a Voter

1. Precision – Our interpretation preserves the distinction between development and weaponization, which means we are closer to the framer’s intent. We also discourage recycling hege affs from past years.

2. Limits – Space is literally infinite and possible aff mechanisms are multiplied by the inclusion of and/or in the topic – limiting the military mechanism ensures a focused and predictable debate on peaceful and economic development.

Development ≠ Military 2NC

Even if militarization of space is development, weaponization isn’t – the aff’s offensive space force violates development.

WOLFF, ‘3 (Johannes M. is completing a M.Sc. with the European Institute at the London School of Economics and Political Science in the United Kingdom. “‘Peaceful uses’ of outer space has permitted its militarization— does it also mean its weaponization? “ Disarmament Forum, Vol 1, Issue 6, pg. 1-6)

When considering the early agreements and statements on outer space, one might have the impression that there has been accord on the peaceful use of outer space. Yet despite their claims that space should be reserved for peaceful uses, the United States and the Soviet Union were developing (and later launching) satellites that would serve a growing number of military objectives. As early as 1955, the United States Air Force contracted the development of reconnaissance satellites, an indication that early space programmes were more driven by military considerations and requirements than civil or scientific ones.9

The seeming contradiction over peaceful use emerges from the fact that the relevant agreements never precisely defined ‘peaceful’ and ‘outer space’. With ambiguous definitions subject to various interpretations, certain activities that one would not normally consider peaceful have been pursued. For some nations the term ‘peaceful’ has been interpreted as ‘non-aggressive’ rather than ‘non- military’,10 meaning that all military uses were and are allowed and lawful as long as they remain ‘non- aggressive’ as permitted under Article 2 (4) of the United Nations Charter, which basically prohibits ‘the threat or use of force’.11 The OST allows for ‘passive military’ use of space, for example through reconnaissance, surveillance, early warning or communication satellites.12 The OST also permits military personnel to conduct scientific research in space. Article 51 of the United Nations Charter, which relates to the right of self-defence, can be invoked in outer space. One might argue that using outer space for deterrent and defensive purposes serves the cause of peace and that only when it is used for offensive activities that it goes against the idea of peaceful use.13 However, the distinctions between ‘offensive and defensive actions, active and passive weapons, and aggression and self-defence becomes more and more blurred.’14

Research this cite

<http://www.nationsencyclopedia.com/United-Nations/Peaceful-Uses-of-Outer-Space.html>

\*\*\* MESOSPHERE \*\*\*

Beyond the Mesosphere – 1NC

A. Interpretation: the plan’s exploration or development mechanism must take place 50 miles beyond the Earth’s surface.

1. “Beyond” means outside the limits of

Collins, ‘9 (Collins English Dictionary Unabridged, “beyond”, <http://dictionary.reference.com/browse/beyond>)

-- *prep*

1. at or to a point on the other side of; at or to the further side of: *beyond those hills there is a river*

2. outside the limits or scope of: *beyond this country's jurisdiction*

2. The Mesosphere ends at 50 miles.

Weather Channel, ‘11 (Weather Channel – Weather Glossary, “M”, <http://www.weather.com/glossary/m.html>)

MESOSPHERE

The layer of the atmosphere located between the stratosphere and the ionosphere, where temperatures drop rapidly with increasing height. It extends between 31 and 50 miles (17 to 80 kilometers) above the earth's surface.

B. Violation: The plan increases development in the Mesosphere but not beyond it. The mechanism is less than 50 miles from the Earth’s surface.

Example – Certain satellites exist in the Mesosphere.

Voting issue ---

1. Limits --- a strict interpretation of “beyond the mesosphere” is the only way to prevent an explosion of Affs that expand research into other areas, like high-altitude testing, non-space rockets, aerospace, etc. --- making research impossible

2. Ground --- the mesosphere is what *distinguishes* space from Earth’s environment, critically dividing literature relevant to the topic

3. Education – Going beyond the mesosphere is a prerequisite to understanding SPACE. Everything else is just Earth’s environment.

Athena, ‘10 (Upper Atmosphere Wiki, “Mesosphere”, 4-26, [http://www.athena-spu.gr/~upperatmosphere/index.php/ Mesosphere](http://www.athena-spu.gr/~upperatmosphere/index.php/%20Mesosphere))

Being the “**gateway**” that connects Earth’s environment and space, the **mesosphere** is a region of **great importance** in energy balance processes and a link in vertical energy transfer, as it is in these layers that great surges of energy meet: solar radiation and particles contribute to downward energy transfer, whereas [gravity waves](http://www.athena-spu.gr/~upperatmosphere/index.php/Gravity_Waves), [planetary waves and tides](http://www.athena-spu.gr/~upperatmosphere/index.php/Planetary_Waves_and_Tides) contribute to upward energy transfer from the stratosphere. Thus this region is a boundary layer that determines the temperature and density characteristics of the surrounding layers. In addition, in a time of increased concern about global climate change, the fact that the mesosphere might act as a “canary in a coal mine”, being a sensitive indicator of global temperature change, makes its long-term study an increasingly pressing matter. Finally, the continuous and ever-increasing presence of mankind in space, and the importance of the behavior of this region to multiple issues related to aerospace technology, such as orbital calculations, vehicle re-entry, space debris lifetime etc., make its extensive study a pressing need.

Beyond the Mesosphere – 2NC

“Beyond” means pointing toward the unknown – crucial to retain meaning

Talmey, ‘5 (Professor Emeritus of Linguistics University at Buffalo, State University of New York Visiting Scholar University of California, Berkeley, From perception to meaning: image schemas in cognitive linguistics , Ed. Beate Hampe, Joseph E. Grady)

A second non-geometric category that can occur in association with a geometric schema is that of’ “cognitive/affective state\*'. Its extent of member- ship is not clear. But one recurrent member is the attitude toward a schematic feature that it is unknown, mysterious, or risky. This category member is associated with the English preposition beyond, perhaps in combination with the farther concepts of inaccessibility- or nonvisibility - themselves seeming to have part geometric and part non-geometric aspects. More specifically, these cognitive/affective concepts occur in association with the distal region of space specified by the beyond schema and with the locatedness of the Figure in that region, as seen in (39a). However, these concepts are absent from the otherwise parallel spatial locution on the other side of. as in (39b). (39) a. John is beyond the border. b. John is oil the other side of the border. Thus, a speaker using beyond as in (39a) - in addition to specify ing roughly the same spatial schema as that of on the other side of - also indicates that she in some way regards that region of space as being unfamiliarand the Figure located within it as accordingly being in potential jeopardy.

\*\*\* DEFINITIONS \*\*\*

Definitions: Resolved

## Resolved means to make a firm decision about

**Webster’s II** New College Dictionary, 19**95**, pg.944.

## - vt. 1. To make a firm decision about. 2. To cause (one) to arrive at a decision. 3. To decide or express by formal vote. <...continues...> - vi. 1. To arrive at a decision or make a determination...

**Resolved means to decide by formal vote**

**Webster’s II** New College Dictionary, 19**95**, pg.944.

## - vt. 1. To make a firm decision about. 2. To cause (one) to arrive at a decision. 3. To decide or express by formal vote. <...continues...> - vi. 1. To arrive at a decision or make a determination...

**Resolved means determined.**

**Cambridge** Dictionaries Online, 20**07**.

Resolved, adjective [after verb] FORMAL, determined:, [+ *to* infinitive] He was resolved **to** ask her to marry him the next day.

**Resolved means determined.**

**WordNet**, wordnet.princeton.edu, 20**06**.

[S:](http://wordnet.princeton.edu/perl/webwn?o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&s=resolved&i=7&h=000000000#c) (adj) [single-minded](http://wordnet.princeton.edu/perl/webwn?o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&s=single-minded), **resolved** (determined) *"she was firmly resolved to be a doctor"; "single-minded in his determination to stop smoking"*

**Resolved means to decide by formal vote. (2NC ext.)**

**The American heritage dictionary,** bartleby.com/61/, **2000**.

Resolve

VERB:Inflected forms: **re·solved**, **re·solv·ing**, **re·solves**  
TRANSITIVE VERB:**1.** To make a firm decision about. **2.** To cause (a person) to reach a decision. See synonyms at [decide](http://www.bartleby.com/61/19/D0071900.html). **3**. **To decide or express by formal vote.** **4.** To change or convert: *My resentment resolved itself into resignation.* **5.** To find a solution to; solve. See synonyms at [**solve**](http://www.bartleby.com/61/39/S0553900.html). **6.** To remove or dispel (doubts). **7.** To bring to a usually successful conclusion: *resolve a conflict.* **8.** *Medicine* To cause reduction of (an inflammation, for example). **9.** *Music* To cause (a tone or chord) to progress from dissonance to consonance. **10.** *Chemistry* To separate (an optically inactive compound or mixture) into its optically active constituents. **11.** To render parts of (an image) visible and distinct. **12.** *Mathematics* To separate (a vector, for example) into coordinate components. **13.** To melt or dissolve (something). **14.** *Archaic* To separate (something) into constituent parts. INTRANSITIVE VERB:**1.** To reach a decision or make a determination: *resolve on a course of action.* **2.** To become separated or reduced to constituents. **3.** *Music* To undergo resolution.

Definitions: Colon (:)

Colon is a punctuation mark that precedes an explanation.

Oxford English Dictionary 08 <http://www.askoxford.com/concise_oed/colon_1?view=uk>

colon 1/koln/ • noun a punctuation mark (:) used to precede a list of items, a quotation, or an expansion or explanation.

Colon is the sign used to introduce a sentence or phrase.

Cambridge Dictionary Online 08 <http://dictionary.cambridge.org/define.asp?key=14990&dict=CALD>

colon (SIGN) Show phonetics noun [C] the sign (:) used in writing, especially to introduce a list of things or a sentence or phrase taken from somewhere else

Definitions: The

**The word “the” particularizes its noun.**

**Words and Phrases** Second Series, 1914, Updated 19**64**, Volume 4, 1905, pg. 893.

As designating a particular object

**The article “the” directs what particular thing or things are to be taken or assumed as spoken of, and determine what particular thing is meant. It is used before nouns with a specifying or particularizing effect** so that its use immediately preceding “state” in the constitutional requirement that indictments shall conclude “against the peace and dignity of the state,” points out the state whose peace and dignity has been offended, and its omission in the indictment is a fatal defect.

## The word “the” specifies the noun after it to be a particular specific one.

**Webster’s II** New College Dictionary, 19**95**, pg.1143.

**1. a.**  – **Used before singular or plural nouns and noun phrases that denote particular persons or things** <read *the* newspaper> **b.** – Used before a noun, and generally stressed, emphasizing one of a group or type as the most outstanding or prominent <...continues...>

**The word “the” particularizes its noun.**

**Cambridge** Dictionaries Online, 20**07.**

The (PARTICULAR) – determiner – 1 **used before nouns to refer to things or people when a listener or reader knows which particular things or people are being referred to**, especially because they have already been mentioned or because what is happening makes it clear:

**The word “the” implies there is only one – as in the USFG.**

**Cambridge** Dictionaries Online, 20**07.**

**used to refer to things or people when only one exists at any one time**:

‘The’ means all parts.

Merriam-Webster's Online Collegiate Dictionary, No Date,

http://www.m-w.com/cgi-bin/dictionary

4 -- used as a function word before a noun or a substantivized adjective to indicate reference to a group as a whole <the elite

Definitions: United States

United States is the country that geographically occupies the 50 states it encompasses.

The American Heritage Dictionary, bartleby.com/61/, 2000

United States of America... A country of central and northwest North America with coastlines on the Atlantic and Pacific oceans. It includes the noncontiguous states of Alaska and Hawaii and various island territories in the Caribbean Sea and Pacific Ocean. The area now occupied by the contiguous 48 states was originally inhabited by numerous Native American peoples and was colonized beginning in the 16th century by Spain, France, the Netherlands, and England. Great Britain eventually controlled most of the Atlantic coast and, after the French and Indian Wars (1754–1763), the Northwest Territory and Canada.

“United States” is one nation

**Words and Phrases** Second Series, 1914, Updated 19**64**, Volume 4, 1905, pg. 1074.

## The “United States” are for many important purposes a single nation, and in all commercial regulations we are one and the same people.

United States is the republic containing 50 states, not just the 50 states themselves.

**WordNet**, wordnet.princeton.edu, 20**06**.

S: (n) United States, United States of America, America, the States, US, U.S., USA, U.S.A. (North American republic containing 50 states - 48 conterminous states in North America plus Alaska in northwest North America and the Hawaiian Islands in the Pacific Ocean; achieved independence in 1776)

united states means the united states of america

The American Heritage Dictionary, 1983, p. 857.

United States: Also United States of America. Country of central and NW North America, with coastlines on the Atlantic, Pacific, and Arctic oceans. Cap. Washington, D.C. Pop. 226,504,825.

UNITED STATES INCLUDES 50 STATES, D.C., AND ALL TERRITORIES

US Department of Defense- 2005 “Base Realignment and Closure” http://www.defense.gov/brac/definitions\_brac2005.html

United States

The 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, American Samoa, and any other territory or possession of the United States.

Definitions: Federal Government

Federal government is national government that expresses power

**Black’s Law** Dictionary, 8th Edition, June 1, 20**04**, pg.716.

*Federal government.* 1. **A national government that exercises some degree of control over smaller political units that have surrendered some degree of power in exchange for the right to participate in national politics matters – Also termed (in federal states) central government. 2. the U.S. government** – Also termed national government. [Cases: United States -1 C.J.S. *United States* - - 2-3]

**Federal refers to the government system especially in the US.**

**Black’s Law** Dictionary, 8th Edition, June 1, 20**04,** pg.642.

federal**,** adj.**Of or relating to a system of associated governments with a vertical division of governments into national and regional components having different responsibilities; esp., of or relating to the national government of the United States**. – Abbr. Fed.

**Government is the structure of the state determining how it is regulated.**

**Black’s Law** Dictionary, 8th Edition, June 1, 20**04,** pg. 715-716.

Government. **1. The structure of principles and rules determining how a state or organization is regulated. 2. the sovereign power in a nation or state. 3. An organization through which a body of people exercises political authority; the machinery by which sovereign power is expressed** <the Canadian government>. – In this sense, the term refers collectively to the political organs of a country regardless of their function or level, and regardless of the subject matter they deal with. Cf. NATION; STATE

“Federal government” refers to the central government of a federation.

WEBSTER'S NEW INTERNATIONAL DICTIONARY UNABRIDGED, 1976, p. 833.

**Federal government. Of or relating to the central government of a nation**, having the character of a federation as distinguished from the governments of the constituent unites (as states or provinces).

Definitions: USFG

The United States Federal Government is the combination of legislative, judicial, and executive branches.

USA.gov, February 27th, 2007[“U.S. Federal Government, Available Online at <http://www.usa.gov/Agencies/federal.shtml>, Accessed July 3, 2007// Darxlice]

U.S. Federal Government **The three branches of U.S. government—legislative, judicial, and executive**—carry out governmental power and functions. View a [complete diagram](http://www.usa.gov/external/external.jsp?url=http://bensguide.gpo.gov/files/gov_chart.pdf) (.PDF) of the U.S. government's branches. [Executive Branch](http://www.usa.gov/Agencies/Federal/Executive.shtml) The executive branch of the government is responsible for enforcing the laws of the land. The president, vice president, department heads (cabinet members), and heads of independent agencies carry out this mission. [Judicial Branch](http://www.usa.gov/Agencies/Federal/Judicial.shtml) Courts decide arguments about the meaning of laws and how they are applied. They also decide if laws violate the Constitution—this is known as judicial review, and it is how federal courts provide checks and balances on the legislative and executive branches. [Legislative Branch](http://www.usa.gov/Agencies/Federal/Legislative.shtml) Article I of the Constitution establishes the legislative or law making branch of government. It has a two-branch Congress—the Senate and the House of Representatives—and agencies that support Congress.

The United States Federal Government is the government of the United States of America, made up of three branches.

Answers.com, 2007[“Federal Government of the United States,” Available Online at <http://www.answers.com/topic/federal-government-of-the-united-states>, Accessed July 3, 2007// Darxlice]

**The [government](http://www.answers.com/topic/government" \t "_top) of the [United States of America](http://www.answers.com/topic/united-states" \t "_top)**, established by the [U.S. Constitution](http://www.answers.com/topic/united-states-constitution" \t "_top), is a [federal republic](http://www.answers.com/topic/federal-republic" \t "_top) of [individual states](http://www.answers.com/topic/u-s-state" \t "_top). The [laws of the United States](http://www.answers.com/topic/law-of-the-united-states" \t "_top) are laid out in [Acts of Congress](http://www.answers.com/topic/act-of-congress" \t "_top) (especially the [United States Code](http://www.answers.com/topic/united-states-code" \t "_top) and [Uniform Code of Military Justice](http://www.answers.com/topic/uniform-code-of-military-justice" \t "_top)), [administrative regulations](http://www.answers.com/topic/regulation-3" \t "_top), and judicial cases interpreting the statutes and regulations. **The federal government has three branches: the [executive](http://www.answers.com/topic/executive-government" \t "_top), [legislative](http://www.answers.com/topic/legislature" \t "_top), and [judicial](http://www.answers.com/topic/judiciary-1" \t "_top)**. Through a system of [separation of powers](http://www.answers.com/topic/separation-of-powers-under-the-united-states-constitution" \t "_top) or "checks and balances" (historical phrase), **each of these branches has some authority to act on its own, some authority to regulate the other two branches, and has some of its own authority, in turn, regulated by the other branches**.

“United States federal government” is the central government in d.c.

Encarta World Online Encyclopedia, 2006,

http://encarta.msn.com/encyclopedia\_1741500781/United\_States\_(Government).html

**United States Government**, the combination of federal, state, and local laws, bodies, and agencies that is responsible for carrying out the operations of the United States. **The federal government of the United States is centered in Washington, D.C.**

USFG IS ALL 3 BRANCHES

LaborLawTalk Dictionary 2007 http://dictionary.laborlawtalk.com/United\_States\_Federal\_Government

The government of the United States, established by the Constitution, is a federal republic of 50 states, a few territories and some protectorates. The national government consists of the executive, legislative, and judicial branches. The head of the executive branch is the President of the United States. The legislative branch consists of the United States Congress, while the Supreme Court of the United States is the head of the judicial branch.

Definitions: Should

**“Should” implies duty.**

**Words and Phrases** Second Series, 1914, Updated 19**64**, Volume 4, 1905, pg. 578.

The word “should,” as used in instructions, may convey to the jury the sense of duty and obligation.

**“Should” means obligation.**

**Jargon Buster**, AskOxford.com, 20**07**

Should modal verb (3rd sing. should) 1 used to indicate obligation, duty, or correctness. 2 used to indicate what is probable. 3 formal expressing the conditional mood. 4 used in a clause with ‘that’ after a main clause describing feelings. 5 used in a clause with ‘that’ expressing purpose. 6 (in the first person) expressing a polite request or acceptance. 7 (in the first person) expressing a conjecture or hope.

## SHOULD MEANS DUTY

The American Heritage® Dictionary of the English Language, Fourth Edition. Retrieved July 27, 2007, from Dictionary.com website: http://dictionary.reference.com/browse/SHOULD

Used to express obligation or duty

Should is the past tense of shall

Dictionary.com unabridged 06 ["should." *Dictionary.com Unabridged (v 1.1)*. Random House, Inc. 01 Jul. 2007. <Dictionary.com <http://dictionary.reference.com/browse/should>>.]

–auxiliary verb

1. **pt. of shall**.

2. (used to express condition): Were he to arrive, I should be pleased.

3. must; ought (used to indicate duty, propriety, or expediency): You should not do that.

4. would (used to make a statement less direct or blunt): I should think you would apologize.

Definitions: Substantially

**Substantially means** 1. essentially; 2.**without material qualifications**

**Black's Law** Dictionary: Definitions of the Terms and Phrases of American and English Jurisprudence, Ancient and Modern, West Group, 19**91**, pg. 1024

Definitions: Substantially

Court cases support our definition

**Justice** Frank G. **Clement** Jr., **6-30-06**, Court of Appeals of Tennessee, 2006 Tenn. App. LEXIS 446

Tenn. Code Ann. § 36-6-108 does not define the term "substantially equal." However, no special definition is required because the **common meaning** of the words and the phrase are **easily understood.** The word "substantially" means "essentially," "**to all intents and purposes**," or "**in regard to everything material**." 17 OXFORD ENGLISH DICTIONARY 68 (2d ed.1989). Thus, the **plain meaning** of the term "substantially equal" connotes a relationship that is very close to equality-so close that it may be considered equal.

## Substantially means essentially.

**Words and Phrases** Second Series, 1914, Updated 19**64**, Volume 4, 1905, pg. 753.

“Substantially” means in substance; in the main; essentially; by including the material or essential part.

**Substantial means real**

**The American heritage dictionary,** bartleby.com/61/, **2000**.

1. Of, relating to, or having substance; material. 2. True or real; not imaginary. 3. Solidly built; strong. 4. Ample; sustaining: *a substantial breakfast.* 5. Considerable in importance, value, degree, amount, or extent: *won by a substantial margin.* 6. Possessing wealth or property; well-to-do.

**Substantially means to a great extent**

**WordNet**, wordnet.princeton.edu, 20**06**.

[S:](http://wordnet.princeton.edu/perl/webwn?o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&s=substantially&i=0&h=00#c) (adv) [well](http://wordnet.princeton.edu/perl/webwn?o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&s=well), [considerably](http://wordnet.princeton.edu/perl/webwn?o2=&o0=1&o7=&o5=&o1=1&o6=&o4=&o3=&s=considerably), substantially (to a great extent or degree) *"I'm afraid the film was well over budget"; "painting the room white made it seem considerably (or substantially) larger"; "the house has fallen considerably in value"; "the price went up substantially"*

Definitions: Substantially

Substantially must be given meaning – the best way is an appeal to field context

**Devinsky, 02** (Paul, IP UPDATE, VOLUME 5, NO. 11, NOVEMBER 2002, “Is Claim "Substantially" Definite?  Ask Person of Skill in the Art”, http://www.mwe.com/index.cfm/fuseaction/publications.nldetail/object\_id/c2c73bdb-9b1a-42bf-a2b7-075812dc0e2d.cfm)

In reversing a summary judgment of invalidity, the U.S. Court of Appeals for the Federal Circuit found that the district court, by failing to look beyond the intrinsic claim construction evidence to consider what a person of skill in the art would understand in a "technologic context," erroneously concluded the term "substantially" made a claim fatally indefinite.  Verve, LLC v. Crane Cams, Inc., Case No. 01-1417 (Fed. Cir. November 14, 2002). The patent in suit related to an improved push rod for an internal combustion engine.  The patent claims a hollow push rod whose overall diameter is larger at the middle than at the ends and has "substantially constant wall thickness" throughout the rod and rounded seats at the tips.  The district court found that the expression "substantially constant wall thickness" was not supported in the specification and prosecution history by a sufficiently clear definition of "substantially" and was, therefore, indefinite.  The district court recognized that the use of the term "substantially" may be definite in some cases but ruled that in this case it was indefinite because it was not further defined. The Federal Circuit reversed, concluding that the district court erred in requiring that the meaning of the term "substantially" in a particular "technologic context" be found solely in intrinsic evidence:  "While reference to intrinsic evidence is primary in interpreting claims, the criterion is the meaning of words as they would be understood by persons in the field of the invention."  Thus, the Federal Circuit instructed that "resolution of any ambiguity arising from the claims and specification may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention."  The Federal Circuit remanded the case to the district court with instruction that "[t]he question is not whether the word 'substantially' has a fixed meaning as applied to 'constant wall thickness,' but how the phrase would be understood by persons **experienced in this field** of mechanics, upon reading the patent documents."

substantially means including the material or essential part

Words and Phrases, 05 (v. 40B, p. 329)

Okla. 1911. “Substantially” means in substance; in the main; essentially; by including the material or essential part.

substantially means to a great extent or considerably

Wordnet, 03 (Princeton University, version 2.0, http://dictionary.reference.com/browse/substantially)

**substantially**adv 1: **to a great extent or degree**; "I'm afraid the film was well over budget"; "painting the room white made it seem considerably (or substantially) larger"; "the house has fallen considerably in value"; "the price went up substantially" [syn: [well](http://dictionary.reference.com/search?q=well), [considerably](http://dictionary.reference.com/search?q=considerably)] 2: in a strong substantial way; "the house was substantially built"

Definitions: Substantially

**A substantial increase is at least 30%**

<http://www.freepatentsonline.com/20060057593.html>

[0011] A substantial increase in the amount of a CFTR target segment identified means that the segment has been duplicated while a substantial decrease in the amount of a CFTR target segment identified means that the target segment has been deleted. **The term "substantial decrease" or "substantial increase" means a decrease or increase of at least about 30-50%**. Thus, deletion of a single CFTR exon would appear in the assay as a signal representing for example of about 50% of the same exon signal from an identically processed sample from an individual with a wildtype CFTR gene. Conversely, amplification of a single exon would appear in the assay as a signal representing for example about 150% of the same exon signal from an identically processed sample from an individual with a wildtype CFTR gene.

Substantial aid means 35%

<http://www.eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED224447&ERICExtSearch_SearchType_0=eric_accno&accno=ED224447>

The text of federal oversight hearings on Title III of the Institutional Aid Program is presented. Statements by various college administrators, higher education association representatives, and state legislators are included. The proposed regulations were issued pursuant to Title III of the Education Amendments of 1980. In addition to clarifying the Department of Education's (ED) proposed regulations, the hearing is also designed to identify the data needed to carry out Congress's intent and to assure smooth operation of the grant process. Attention is directed to four basic issues: (1) institutional eligibility and use of 1978-1979 Pell Grant data in determining institutional eligibility; (2) the definition of "substantial" as proposed in the regulation; (3) emphasis on achieving institutional self-sufficiency or graduation from the Title III program; and (4) the regulatory limitations placed on explicit statutory set-asides for community colleges and historically black colleges. To be eligible, an institution must enroll a substantial percentage of students receiving need-based student financial assistance under Title IV, and the average amount of this student assistance must be high as compared with similar institutions. Based on the ED assumption that Congress expected that the statutory eligibility criteria would identify institutions that serve low-income students, **the Department suggests that 35 percent be used as the definition of "substantial percentage,"** and advises that the high-average award requirement in the law be deleted. (SW).

Substantial increase means 5 percent

Kuehl – State Senator of Los Angeles, California – 2006

[February 23, http://info.sen.ca.gov/pub/bill/sen/sb\_1501-1550/sb\_1535\_bill\_20060403\_amended\_sen.html]

(c) For purposes of this article, "**substantial increase" means an increase in excess of 5 percent** of the Fish and Game Preservation Fund portion of the department's current year support budget, excluding cost-of-living increases provided for salaries, staff benefits, and operating expenses.

Substantially is at least 90%

Words and Phrases, 05 (v. 40B, p. 329)

N.H. 1949. **The word “substantially**” as used in provision of Unemployment Compensation Act that experience rating of an employer may be transferred to an employing unit which acquires the organization, trade, or business, or “substantially” all of the assets thereof, **is an elastic term** which does not include a definite, fixed amount of percentage, and the transfer **does not have to be 100 per cent but cannot be less than 90 per cent in the ordinary situation**. R.L. c 218, § 6, subd. F, as added by Laws 1945, c.138, § 16.

Definitions: Substantial (Context)

Substantial reduction is at least 50% (in joint ACAT ID programs)

Office of the security of defense (D.O.D) April 5, 2002 (“DoD 5000.2-R” “MANDATORY PROCEDURES FOR MAJOR DEFENSE ACQUISITION PROGRAMS (MDAPS) AND MAJOR AUTOMATED INFORMATION SYSTEM (MAIS) ACQUISITION PROGRAMS” [**http://exploration.nasa.gov/documents/TTT\_052005/DoD50002R.pdf?q=dod-financial-management-regulation-volume-2b-chapter-17**](http://exploration.nasa.gov/documents/TTT_052005/DoD50002R.pdf?q=dod-financial-management-regulation-volume-2b-chapter-17))

C7.10.3.12. The DoD Components shall not terminate or substantially reduce participation in joint ACAT ID programs without Requirements Authority review and USD(AT&L) approval; or in joint ACAT IA programs without Requirements Authority review and ASD(C3I) approval. The USD(AT&L) or ASD(C3I) may require a DoD Component to continue some or all funding, as necessary, to sustain the joint program in an efficient manner, despite approving their request to terminate or reduce participation. Substantial reduction is defined as a funding or quantity decrease of 50 percent or more in the total funding or quantities in the latest President's Budget for that portion of the joint program funded by the DoD Component seeking the termination or reduced participation.

Substantial reduction is at least 25% (in international cooperative ACAT ID programs)

Office of the security of defense (D.O.D) April 5, 2002 (“DoD 5000.2-R” “MANDATORY PROCEDURES FOR MAJOR DEFENSE ACQUISITION PROGRAMS (MDAPS) AND MAJOR AUTOMATED INFORMATION SYSTEM (MAIS) ACQUISITION PROGRAMS” [**http://exploration.nasa.gov/documents/TTT\_052005/DoD50002R.pdf?q=dod-financial-management-regulation-volume-2b-chapter-17**](http://exploration.nasa.gov/documents/TTT_052005/DoD50002R.pdf?q=dod-financial-management-regulation-volume-2b-chapter-17))

C7.11.3.2. The DoD Components shall not terminate or substantially reduce participation in international cooperative ACAT ID programs under signed international agreements without USD(AT&L) approval; or in international cooperative ACAT IAM programs without ASD(C3I) approval. A DoD Component may not terminate or substantially reduce U.S. participation in an international cooperative program until after providing notification to the USD(AT&L) or ASD(C3I). As a result of that notification, the USD(AT&L) or the ASD(C3I) may require the DoD Component to continue to provide some or all of the funding for that program in order to minimize the impact on the international cooperative program. Substantial reduction is defined as a funding or quantity decrease of 25 percent or more in the total funding or quantities in the latest President's Budget for that portion of the international cooperative program funded by the DoD Component seeking the termination or reduced participation.

A2: Mat Qual

Doesn’t mean all

Justice Berdon, 8-24-99, Supreme Court of Connecticut, 250 Conn. 334; 736 A.2d 824; 1999 Conn. LEXIS 303

In addition, the plain meaning of "substantially" does not support the defendant's arguments. Black's Law Dictionary (6th Ed. 1990) defines "substantially" as "essentially; without material qualification; in the main . . . in a substantial manner." Likewise, "substantial" is defined as, "of real worth and importance; of considerable value; valuable. Belonging to substance; actually existing; real; not seeming or imaginary; not illusive; solid; true; veritable. . . . Synonymous with material." (Citations omitted.) Id. Thus, the requirement of a "substantial" association creates a threshold far below the exclusive or complete association argued by the defendant.

Definitions: Its

**Its means possession**

**Encarta, 9** (Encarta World English Dictionary, http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861622735)

its [ its ]   
adjective  Definition:   **indicating possession**: used to indicate that something belongs or relates to something  
http://encarta.msn.com/xImages/dictionary/bullet.gifhttp://encarta.msn.com/xImages/trans.gifThe park changed its policy.

**Its means belonging to**

**Oxford English Dictionary, 89** (2nd edition, online at Emory)

its, poss. pron.

**A.** As *adj. poss. pron.* Of or belonging to it, or that thing (L. *ejus*); also *refl.*, Of or belonging to itself, its own (L. *suus*)

Definitions: Exploration

Space exploration includes use of satellites, probes, and human spacecraft

Free Dictionary 11 (http://encyclopedia2.thefreedictionary.com/space+exploration)

space exploration, the investigation of physical conditions in space and on stars, planets, and other celestial bodies through the use of artificial [satellites](http://encyclopedia2.thefreedictionary.com/satellite%2c+artificial) (spacecraft that orbit the earth), [space probes](http://encyclopedia2.thefreedictionary.com/space+probe) (spacecraft that pass through the solar system and that may or may not orbit another celestial body), and spacecraft with human crews.

Exploration includes both robotic and human activities

Brook 10 (Richard, Consultant – Surrey Satellite Technology, et al., “Space Exploration, A New European Flagship Programme”, Space Advisory Group, 10-10, <http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=6195>)

The relevance of space in the new TFEU should be reflected in space policies and programmes with the appropriate budgets by extending the scope and ambitions of the EU contribution. There are many reasons that justify the need to devote additional EU resources to Space exploration. In this document, the term "space exploration" refers to "the combination of robotic and human activities for the discovery of extra-terrestrial environments that will open up new frontiers for the acquisition of knowledge and peaceful expansion of humankind”. The broad scope of this definition requires that the EU prioritise the proposed activities to be addressed in line with the potential financial envelope and technological capabilities.

Exploration must include a deep space focus.

Schmitt, ‘3 (Harrison, Chair – Interlune-Intermars Initiative, Inc. and Astronaut – Apollo 17, Testimony Before the Senate Commerce, Science, and Transportation Committee, 11-6, [http://www.chicagospace.org/schmitttestimony.ht ml](http://www.chicagospace.org/schmitttestimony.html))

Appendix A: Space Exploration And Development - Why Humans?

The term "space exploration" implies the exploration of the Moon, planets and asteroids, that is, "deep space," in contrast to continuing human activities in Earth orbit. Human activities in Earth orbit have less to do with exploration and more to do with international commitments, as in the case of the Space Station, and prestige and technological development, as in the case of China and Russia. There are also research opportunities, not fully recognized even after 40 years, that exploit the opportunities presented by being in Earth orbit. Deep space exploration has been and should always be conducted with the best combination of human and robotic techniques. Many here will argue the value of robotics. I will just say that any data collection that can be successfully automated at reasonable cost should be. In general, human being's should not waste their time with activities such as surveying, systematic photography, and routine data collection. Robotic precursors into situations of undefined or uncertain risk also are clearly appropriate.

Limiting “exploration” to only human travel is outdated

Lester, ‘9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 236)

The word ‘‘exploration’’ threads its way through every discussion of human space ﬂight and often headlines national policy statements about the US space agency. Yet this concept, so rooted in our culture, remains remarkably ill-defined. In this paper, we examine various presumptions implicit in the term and its ramifications for federally supported space endeavors. We argue that historical examples of exploration, widely used by policy makers, often make poor models for contemporary space travel. In particular, historical precedents of exploration set up a land-biased view of discovery, a restriction which impedes full expression of the Vision for Space Exploration and its possible scientific returns. These same precedents also set up a view of discovery that is biased toward *in situ* human presence, a view that modern technology is rendering increasingly absurd.

Definitions: Exploration

“Exploration” can target any celestial object

Stocker 6 (Brian, Physicist and Former Teacher, “Teaching Space and the Solar System”, Education Articles, 6-27, <http://www.edarticle.com/article.php?id=5>)

What is space exploration? The age of space exploration began in the sixth decade of the 20th century. Since that time, robot probes and human beings have ventured beyond the limits of the Earth’s atmosphere. Today, space explorations include the investigation of celestial objects ranging in size from cosmic dust to the giant planets of the solar system. Because of technology, humans are continuously discovering more about life and forces in space. The possibilities are endless.

“Exploration” includes astronomy

Lester 9 (Daniel F., Professor of Astronomy – University of Texas, and Michael Robinson, Professor of History – Hillyer College, “Visions of Exploration”, Space Policy, 25(4), November, p. 242)

What to do? There are few easy answers. However, the history of US exploration offers insight about places we can start. First, we should accept that ‘‘exploration’’ is a multivalent term, with many meanings, some of which are contradictory, and all of which have historical precedent. For too long we have looked at the history of exploration selectively, seeking to ﬁnd the antecedents which justify our own vision of exploration: as science, as human adventure, as geopolitical statement. This is a deﬁnitional fight which cannot be won. Space policy must acknowledge the multiple visions for space exploration, developing a clear-eyed metric of value which avoids the vagaries of lofty ‘‘exploration-speak’’. If the merits of human exploration of the Moon and Mars are primarily symbolic and geopolitical, what are these goals worth in terms of federal funding? What are costs and benefits of missions developed to express ‘‘soft power’’ vs. science? Finally, which goals or combination of goals offers the best chance of longterm buy-in by the taxpayer? While historical precedent defines exploration in terms of human explorers who travel to new destinations, that definition is woefully obsolete with regard to discovery in an era in which teleoperation offers virtual presence for explorers who remain on the surface of the Earth. As has been pointed out by many authors, ‘‘robots’’ have come to be less personal assistants who follow us dutifully, and more expendable extensions of our senses. In this respect, science can be viewed as arguably the most important frontier for humankind, and whether it is done by humans in situ or by humans remotely is no longer a particularly relevant distinction.

Space exploration is the expansion of human influence in space

Sabathier 9 (Vincent G., Senior Associate in the Technology and Public Policy Program – Center for Strategic and International Studies, “The Role of NASA 40 Years after the Lunar Landing”, 7-20, <http://csis.org/publication/role-nasa-40-years-after-lunar-landing>)

Space exploration is the expansion of human influence in space. This definition of exploration is inherently one of capacity building. Human influence in space is a measure of our ability to do useful things beyond the Earth’s surface. In order to do something useful, there has to be some sort of human presence—either humans themselves or their robotic proxies. Once some measure of human influence has been established at some destination in space, there are two ways a space exploration agency can expand that influence. First, the agency can decrease the costs and increase the benefits of human influence at a given location until such influence becomes sufficiently useful that it is economically self-sustaining, at which point continued use of agency resources is unnecessary. Alternately, human influence can be extended to some new place that may in the future become home to some form of self-supporting human influence. The key element is that such a mandate compels each step to build on past accomplishments and lay the groundwork for future missions.

Definitions: And/Or

One or the other or both

Words and Phrases, ‘7 (3A W&P, p. 220)

C.A.1 (Mass.) 1981. Words “and/or,” for contract purposes, commonly mean the one or the other or both.—Local Division 589, Amalgameted Transit Union, AFL-CIO, CLC v. Com. Of Mass., 666 F.2d 618, certiorari denied Local Div. 589, Amalgamated Transit Union AFL-CIO v. Massachusetts, 102 S.Ct. 2928, 457 U.S. 1117, 73 L.Ed.2d 1329.—Contracts 159.

And/or means one or the other or both

Pullum, ‘8 (Geoffrey K., Professor of General Linguistics – University of Edinburgh, “[And/or: "and AND or", or "and OR or"?](http://languagelog.ldc.upenn.edu/nll/?p=35)”, Language Log, 4-14, http://languagelog.ldc.upenn.edu/nll/?p=35)

Does and/or mean "and and or", or "and or or"? That is, if I say I am interested in *A* and/or *B*, do I mean I'm interested in *A* and *B* and I'm interested in *A* or *B*, or do I mean that I'm interested in *A* and *B* or I'm interested in *A* or *B*? (You may want to say that it means I'm interested in *A* and *B* and/or I'm interested in *A* or *B*; but in that case I repeat my question.) Having reflected on it for a little while, I am convinced that the answer has to be that A and/or B must mean "A and B or A or B". That is, if an entity *A* is claimed to have the property of being *F and/or G*, the claim amounts to saying that either (i) *A* has the property of being both *F* and *G* or (ii) *A* has the property of being either *F* or *G*. And to claim that *F* is a property of entities *A and/or B* is to claim that either (i) *F* holds for *A* and *B* or (ii) *F* holds for *A* or *B*. However, in that case and/or is effectively identical in meaning with or, so it is at first rather hard to see why *and/or* exists at all. But I do have a guess. The right theory of what *or* means in English is that it is in general inclusive but that sometimes the exclusive special case is conveyed as a conversational implicature. *I'm going to study linguistics at either York or Edinburgh* would often be taken to have the exclusive sense: since you typically go to a single university to take a single degree, and during the degree course you have no time to study elsewhere, a decision to choose York would normally exclude choosing Edinburgh as well. The exclusive sense is thus conveyed: one or the other of York and Edinburgh will be chosen, and if it is York it will not be Edinburgh, and if it is Edinburgh it will not be York. But of course if you think about it, someone who says she is choosing between those two universities does not commit herself for life to never studying at the other. When the two alternatives exclude each other, then the exclusive meaning is the only one that makes sense. If you are asked whether you want to sit in the stalls or in the balcony, it's one or the other but not both, because you can only be in one place at one time. When they don't exclude each other, it's always understood that or allows for both: obviously someone whose ambition is to win either an Oscar or an Olympic medal wouldn't feel a failure if they won both. Winning both would satisfy the ambition in spades. So my guess would be that *and/or* is a way of underlining the point that the *or* is to be understood in its inclusive sense rather than its exclusive sense. Sometimes you want to explicitly indicate "or more than one of the above", and *and/or* does that. Take the first example of *and/or* in the *Wall Street Journal* corpus of 1987-1989 (a 44-million-word collection of random articles that linguists often use as a source for real-life examples because the Linguistic Data Consortium — the host for the giant Language Log servers — made it available in 1993 nice and cheap). The example (which actually happens to be a quotation from the *Washington Post*) is this: *Too many of his attitudes, claims and complaints are careless, conflicting, dubious, inaccurate, mean, petty, simplistic, superficial, uninformed and/or pointlessly biased.* I take it as obvious that if one hundred percent of the hapless man's attitudes, claims and complaints had all ten properties — every single one was careless and conflicting and dubious and inaccurate and mean and petty and simplistic and superficial and uninformed and pointlessly biased — then the quoted claim would be regarded as true, not false. An or would have done the job here, but the and/or injects a (logically redundant) reminder that it may well be the case that more than one of the list of ten properties applies to the miserable individual in question.

“And/or” still subjugates all elements of the list to the modifier “nearly all”

Justice Kevin E. Booth, 3-3-94, Superior Court of Connecticut, Judicial District of New Haven, 1994 Conn. Super. LEXIS 554

While the court recognizes the Bania is concerned with the sale of liquor and Mack is concerned with jury instructions, the cases make it relatively clear that the frequently used legal expression "and/or" has no clear meaning as either disjunctive or conjunctive. Faced with this ambiguity the court must determine whether the phrase "the lot has at least 80% of the required area and/or frontage" is reasonably read in the context of the regulation as requiring 80% of one or the other or 80% of both, or perhaps most logically, 80% of that factor which is undersized. Recognizing that the Zoning Commission in the instant case has given the Zoning Board of Appeals wide discretion and is using a special exception to achieve a result that might otherwise have been possible only by variance supported by the statutorily required showing of hardship, the court holds that the more restrictive interpretation of the term "and/or" is justified. Considering all of the circumstances surrounding the purpose and use of the regulation, it is the holding of the court that the special exception may be granted only when the property involved contains at least 80% of both the required square footage and the required frontage. Not only is such a reading consistent with the language used in the regulation, but it bolsters the regulation by appropriately limiting what might otherwise be an improper delegation from the zoning authority to the Zoning Board of Appeals. Accordingly, in the appeal in Docket No. CV 93-0349797 affecting 26 Circle Street, because the frontage has been reduced to less than 80% of the required 60 feet, the appeal is sustained and the action of the West Haven Zoning Board of Appeals is reversed.

Definitions: Development

Development of space means industrial applications in space – includes mining and production in space

Twibell, ’97 (J.D. Candidate, 1998, University of Missouri-Kansas City School of Law. Space Law: Legal Restraints on Commercialization and Development of Outer Space, 65 UMKC L. REV. 590)

Man's exploration of space is often analogized to his exploration of the ancient oceans. Ancient sea-explorers faced obstacles of uncharted oceans and land. They also faced difficulties in finding the means and financing to make their discoveries. Space industrial development suffers difficulties as well, however, many of the difficulties are legal obstacles. This author [n1](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n1) and numerous legal authorities [n2](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n2) have asserted that international space law presently hinders the commercial development of outer space, and thus, requires legal change. Vigorous space commercial development is crucial, however, not for intellectual development alone. [n3](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n3) It offers massive economic, [n4](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n4) medical, [n5](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n5) industrial, [n6](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n6) and humanitarian rewards. [n7](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n7)  [\*261]  Better vaccines and antibiotics can be produced in space in far greater quantities than on earth. [n8](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n8) Mining the moons, [n9](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n9) asteroids, [n10](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n10) and comets [n11](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n11) provides answers to future energy depletion and would provide enormously less expensive construction of spacecraft and colonies than launching from Earth. [n12](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n12) Space industry also paves the way in addressing future crises both manmade [n13](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n13) and natural. [n14](http://0-www.lexisnexis.com.library.lausys.georgetown.edu/lnacui2api/" \l "n14)

“Space development” includes launch vehicles, ISS development, and remote sensing satellites

Collins, ‘2 (Patrick, Azabu University, “The Cost to Taxpayers of Governments' Anti-Space Tourism Policy and Prospects for Improvement”, [http://www.spacefuture.com/archive/pending/the\_cost\_to\_taxpayers\_of\_governments \_anti\_space\_tourism\_policy\_and\_prospects\_for\_improvement.shtml](http://www.spacefuture.com/archive/pending/the_cost_to_taxpayers_of_governments%20_anti_space_tourism_policy_and_prospects_for_improvement.shtml))

As a result, out of space agencies' cumulative funding to date of some $1 trillion, almost nothing has been spent to promote the development of passenger space travel ? although they have acknowledged that this is the only activity that will lead to commercialisation of space activities and hence to economic growth in space. Although space agencies are formally responsible for the commercial development of space, in reality they do no more than try to sell systems they have developed for political reasons. This is entirely different, and economically it is a costly failure. G7 governments' claim thay they are working to commercialise space activities is untrue: they are in fact using taxpayers' money under false pretences. Since the author's ISTS 2000 paper [15] G7 governments have spent a further $36 billion on a range of non-science 'space development' activities, centring on unprofitable expendable launch vehicles, unprofitable e international space station' development, and further unprofitable over-investment in remote sensing satellite systems**.** Over the same period they have once again spent almost nothing on work relevant to passenger travel.

“Development” includes many specific activities

Hsu, ‘9 (Feng, Ph.D. and Senior Fellow – Aerospace Technology Working Group, and Ken Cox, Ph.D. and Founder & Director – Aerospace Technology Working Group, “Sustainable Space Exploration and Space Development - A Unified Strategic Vision”, 2-20, <http://www.spacerenaissance.org/papers/A-UnifiedSpaceVision-Hsu-Cox.pdf>)

In our view, even with adequate reform in its governance model, NASA is not a rightful institution to lead or manage the nation's business in Space Development projects. This is because human space development activities, such as development of affordable launch vehicles, RLVs, space-based solar power, space touring capabilities, communication satellites, and trans-earth or trans-lunar space transportation infrastructure systems, are primarily human economic and commercial development endeavors that are not only cost-benefit-sensitive in project management, but are in the nature of business activities and are thus subject to fundamental business principles related to profitability, sustainability, and market development, etc. Whereas, in space exploration, by its nature and definition, there are basic human scientific research and development (R&D) activities that require exploring the unknowns, pushing the envelope of new frontiers or taking higher risks with full government and public support, and these need to be invested in solely by taxpayer contributions.

Definitions: Development

“Space development” includes launch vehicles, ISS development, and remote sensing satellites

Collins, ‘2 (Patrick, Azabu University, “The Cost to Taxpayers of Governments' Anti-Space Tourism Policy and Prospects for Improvement”, [http://www.spacefuture.com/archive/pending/the\_cost\_to\_taxpayers\_of\_governments \_anti\_space\_tourism\_policy\_and\_prospects\_for\_improvement.shtml](http://www.spacefuture.com/archive/pending/the_cost_to_taxpayers_of_governments%20_anti_space_tourism_policy_and_prospects_for_improvement.shtml))

As a result, out of space agencies' cumulative funding to date of some $1 trillion, almost nothing has been spent to promote the development of passenger space travel ? although they have acknowledged that this is the only activity that will lead to commercialisation of space activities and hence to economic growth in space. Although space agencies are formally responsible for the commercial development of space, in reality they do no more than try to sell systems they have developed for political reasons. This is entirely different, and economically it is a costly failure. G7 governments' claim thay they are working to commercialise space activities is untrue: they are in fact using taxpayers' money under false pretences. Since the author's ISTS 2000 paper [15] G7 governments have spent a further $36 billion on a range of non-science 'space development' activities, centring on unprofitable expendable launch vehicles, unprofitable e international space station' development, and further unprofitable over-investment in remote sensing satellite systems. Over the same period they have once again spent almost nothing on work relevant to passenger travel.

“Space development” includes launching objects and operating satellites

Kwanbo, ‘7 (South Korean Publication, “Space Damages Compensation Act”, Global Legal Information Network, 12-21, <http://www.glin.gov/view.action?glinID=205544>)

There is a rising need to prepare for space accidents. The probability of such accidents has increased as countries around the world have actively pursued space development and private companies that use satellites are appearing. However, it is inappropriate to apply liability with negligence under the civil act to compensate for damages resulting from space accidents considering that space technology engenders many cutting-edge fields such as aerospace, electricity & electronics, telecommunications, and advanced materials. Also, payments for damages would be astronomical: forcing the payment in its entire amount would hinder the private sector's participation in the space development business. The need for a new compensation scheme is clear. This act is intended to set up specific standards and procedures such as the scope of compensation for damages and limits of responsibility for space accidents related to space development activities such as launching of space objects and operating of satellites.

Definitions: Mesosphere

Topical action must be in the thermosphere or higher

Atmospheric Chemistry Glossary 11 (Sam Houston State University, http://www.shsu.edu/~chm\_tgc/Glossary/lmn.html#M)

[Mesosphere](http://www.windows2universe.org/earth/Atmosphere/mesosphere.html) - In the atmosphere, the region immediately above the stratosphere and immediately below the thermosphere. The mesosphere begins about 50 kilometers high at the stratopause and ends about 80 kilometers high at the mesopause. The temperature in the mesosphere decreases sharply with increased altitude. [Journal of the Atmospheric Sciences; v49n24; 2353-2371; 1992.] [Introduction to Meteorology; F.W. Cole; page 7; 1980; John Wiley and Sons New York.]

80 kilometers and above is topical

OED 11 (Compact Oxford English Dictionary, “mesosphere”, http://oxforddictionaries.com/definition/mesosphere?view=uk)

the region of the earth's atmosphere above the stratosphere and below the thermosphere, between about 50 and 80 km in altitude.

Weisstein 7 (Eric W., Math and Science Encyclopedist, World of Astronomy, http://scienceworld.wolfram.com/astronomy/Mesosphere.html)

The region of the [Earth](http://scienceworld.wolfram.com/astronomy/Earth.html)'s atmosphere from roughly 50-80 km altitude.

Aff’s must explore/develop in the ionosphere or higher

Zoom Astronomy Glossary 10 (http://www.enchantedlearning.com/subjects/astronomy/glossary/indexm.shtml#mesosphere)

[MESOSPHERE](http://www.enchantedlearning.com/subjects/astronomy/planets/earth/Atmosphere.shtml)  
The mesosphere is the atmospheric layer between the [stratosphere](http://www.enchantedlearning.com/subjects/astronomy/glossary/indexs.shtml#stratosphere) and the [ionosphere](http://www.enchantedlearning.com/subjects/astronomy/glossary/indexi.shtml#ionosphere). The mesosphere is characterized by temperatures that quickly decrease as height increases. The mesosphere extends from between 31 and 50 miles (17 to 80 kilometers) above the earth's surface.

50 miles or higher

Glossary of Air Pollution Terms 10 (http://www.arb.ca.gov/html/gloss.htm#mesosphere)

Mesosphere

The layer of the Earth's [atmosphere](http://www.arb.ca.gov/html/gloss.htm#atmosphere) above the [stratosphere](http://www.arb.ca.gov/html/gloss.htm#stratosphere) and below the [thermosphere](http://www.arb.ca.gov/html/gloss.htm#thermosphere). It is between 35 and 60 miles from the Earth.

Mesophere is defined by an upper temperature minimum

National Weather Service 9 (National Oceanic and Atmospheric Administration National Weather Service Glossary, http://www.nws.noaa.gov/glossary/index.php?letter=m)

Mesosphere

The atmospheric shell between about 20 km and about 70 to 80 km, extending from the top of the stratosphere (the stratopause) to the upper temperature minimum that defines the mesopause (the base of the thermosphere).

\*\*\* VOTERS \*\*\*

Topicality is a Voter

1. competitive equity - in order for us to have a competitive debate and for the negative to have equal ground the judge must be able to vote on topicality, why would hundreds of teams win on topicality every year if it wasn't a voter?

2. fairness - we can't allow blatantly non topical cases to be run throughout the year, this explodes our research burden and prevents an educational debate

3. we all know that topicality is a debate of competing interpretations, as long as we can prove that our interpretation is better for debate and they don't meet this interpretation then they should lose the round

4. potential abuse - they will continue to run this case the entire year, your ballet acts as a means to stop future abuse by this team, your ballet could not only improve education in this round but in dozens of rounds in the future

5. jurisdiction - the judge acts as a policy maker in round, in accordance with that the judge is given a certain jurisdiction in which they can render decisions, for our community that jurisdiction is the resolution, if the affirmative falls outside of the resolution then you can not vote for that case no matter how good it is

6. predictability - everything found under our interpretation of the resolution is a predictable case, everything which is outside of our interpretation is not, not having a predictable case destroys education as we can not have indepth debates, allowing any case would make policy debate into a public forum where there are only people preaching their ideas and nobody has the ability to respond

Extra T Bad

Extra topical advantages do not warrant an affirmative ballot

Bennett '89 (William; Pragmatic Debate; p. 6)

If' an advantage a harm solution stems from an extratopical plan plank, the affirmative has not, in that area, shown that the topic should be adopted.

Extratopical advantages destroy negative ground: extratopical advantages stem from areas of

ground which compose the non-resolution. Since this is where negative counterplan ground

comes from, permitting ex-tratopical planks is highly destructive of counterplan ground.

Extratopical plan planks destroy debate: Affirmative can utilize exaatopical planks to spike

out any disadvantage which the negative team can run. Thus, fair clash is eliminated and

debaters will leave the activity.

Extratopical plans eliminate resolutional education: The purpose of the debate resolution is to

define an area in which education for the year will take place. Affirmative's advocacy of

extratopical planks decreases the amount resolutional education which we receive.

Extratopical plans destroy resolutional clash: Clash is supposed to revolve around the

resolution. However, the affimative chooses to advocate exmtopical ground Thus, meaningful

resolutional clash is subverted.

Extratopicality negates fair warning: The resolution serves to warn all parties to the round of

the issues which will be dealt with. When affirmative advocates extratopical ground, fair

warning is eliminated and the negative team is unfairly disadvantaged.

Policymaking paradigm supports rejection of extratopical cases: When the President is

presented with a bill, sthe does not have the option to veto only portions of i t Thus, the critic

should not reject only the extratopical planks. Instead, the critic should reject the plan in its

entirety.

Effects (FX) T Bad

1. Effects Unlimit the Resolution - Numerous policies or cases could have the effect of bringing

about topical action circuitously. This kills all predictability and competitive equity in the debate

2. Effects Undercut Negative Ground - I f the Affirmative team gets all indirect and probabilistic

means to a topical outcome, very little Negative ground is left in the debate. This kills all

competitive equity, education, and clash in the debate

3. Effects Make Topicality and Solvency Unnecessary - Effectually topical cases mix burdens and force the judge to assess solvency first, destroying all possible education and clash in the debate round. This violates the principle that prima facie issues should be kept conceptually separate

4. Effects are Inherently Problematic - Topicality is a yes or no stock issue. I f probabilities are

evaluated in this manner, at least the Affirmative team should have to prove a greater than 50%

chance that topical action will result from plan

A2: “Only our case is topical”

1. This argument is ridiculous, their interpretation is neither definitionally or

contextually based which means there is no limit on the resolution

2. If every aff defined their case as topical, each recursive round would do the same,

establishing an infinite limit on the resolution

3. Justifies "only your case is untopical" allowing for idnite abuse by the neg.

4. This interpretation moots the resolution from debate, this has several negative

connotations

a. destroys predictability, the negative already has a difficult job preparing for

such a broad resolution, it would be impossible for the negative to win if their

were no constraints on the affirmative team

b. destroys topic education, avoiding the resolution diminishes our focus on the UN, preventing any form of in depth knowledge

5. Even if this interpretation increases ground, it doesn't increase predictable ground

which is critical to negative strategic calculations, this destroys fairness and thus

education

Competing Interpretations Good

1. It’s the only non-arbitrary standard, abuse and reasonability are inherently subjective and beg for judge intervention, which destroys debate and education

2. All research claims should be based on the best interpretation of the topic

3. The best interpretation can actually be determined, via evaluating a certain set of standards, it’s just like a disad debate

4. Competing interpretation produces real world education, discussing the effects of interpretations is a skill used in law and other professions

5. Competing interpretations is key to ground, predicting cases requires voting for the best interpretation of the topic to give negatives stable boundaries to research within

6. Any other way to evaluate topicality would moot the resolution, killing all predictability

7. Reasonability and abuse aren’t predictable, it creates bad debate by allowing a subjective judge to vote for non-topical cases, it also kills education by being a fluid standard that destroys predictability and preparation.

Topicality Outweighs Theory

1. Topicality is a-priori – it has to be determined before you can access other flows, which is where theory is – they can’t access theory args until they prove they’re topical

2. This isn’t offense – even if they win all their theory arguments that just means the abuse claims from both sides moot out and you vote neg on predictability and competing interpretations

3. Their abuse happened first – the unpredictable and unlimited nature of the aff forced us to run an abusive strategy – they closed off other options

4. If we win they’re untopical, the round never should’ve happened in the first place – everything that happened after the 1AC, including the 1AC and the 2AC theory is moot if the debate shouldn’t have occurred.

AT: K of T 1 / 2

1. Turn – predictable ground is key to clash and preparedness – predictability is a gateway to activism

2. Exclusion is inevitable – time limits, speaking, flowing, speed are all examples of specialized skills debate requires.

3. We aren’t exclusionary, this argument is out of context - There is no limit on them being involved in the activity, just a request they follow certain predetermined rules

4. We aren’t saying that \_\_\_\_\_\_\_\_\_\_\_\_\_ isn’t an important discussion to have – there’s a time and place for everything, and debate isn’t always it. In this setting, their aff is uniquely unfair, even if it should be embraced outside the debate.

5. Predictability outweighs the K – it’s the only way to preserve any neg ground and clash ability – if their advocacy isn’t topical then we can’t answer it which destroys clash and our ability to test their ideas, this subsumes all their activism claims and is also a reason fairness outweighs, under their interpretation the aff could read 8 minutes of “racism bad judge” and sit down, we’d always lose.

6. Turn – they exclude us by ignoring the resolution, which isn’t predictable or fair to us and prevents us from being able to have responsive voices against their argument

7. Turn – Strict legal rule according to definitions and laws like topicality is key to preserve freedom, their interpretation allows for arbitrary decisions by those in power which is what caused their harms in the first place

Hornberger, Aug. 1992. (Jacob G. Founder and President of “the Future of Freedom Foundation.) The constitution and the Rule of Law, <http://www.fff.org/freedom/0892a.asp>

Equally important, the legal concept of “the rule of law” was incorporated into our judicial system. As Hayek explains: “the rule of law means that people do not have to answer to the arbitrary decisions of governmental officials; instead they guide their actions by what is prohibited by a clearly defined law. Freedom, therefore, means answering only to a well-defined, previously established law, rather than to the arbitrary and discretionary edicts of some.

8. Our T arguments outweigh the K – if the K preceeded T there would be no incentive for a team to research a new topic because they could always argue that their case or K from last year outweighs defending the resolution, killing predictability, clash, and education

AT: K of T 2 / 2

9. Turn – failure to adhere to linguistic rules is exclusionary

Richard Mitchell professor of English at Glassboro State College, Less than Words Can Say, 2000.

If you could ask a Jiukiukwe why he takes such pains to address his mother’s only brother’s eldest daughter in just that way, he would probably have to say that he does it because it’s "right." He’s right. That’s why we do things like that too. They’re right. They are "right," however, entirely in a social sense. Language is arbitrary, but it’s not anarchic. Although there’s no reason why this or that in a language should be "right? and something else "wrong," it does not follow that you can do whatever you please in it. At some point, of course, when you wander too far from what is "right" you’ll cease to be intelligible. But long before you reach that point you will send out the news that you are not a member in good standing around here.

A2: Effects (FX) T

Case does not violate effects: All affirmative advantages stem directly from the plan mandates.

Only one step is necessary for solvency.

Effects arguments are infinitely regressive: Any advantage can be argued to involve multiple

steps ad infiniturn. If the steps are direct and supported by evidence, there is no reason to reject

the affirmative.

Counterplan ground is sufficient to check abuse: Cases which claim effects topical advantages

are extremely susceptible to counterplans which suck up the effects topical advantages. Thus,

counterplans are a sufiicient test of aflirmative abuse.

Effects topicality involves contradictory theoretical arguments: Topicality is a ground

preservation issue for the negative. Effects topical cases expand negative disadvantage ground

since the disadvantage can link off the effects topical portion of plan. Thus, there is no unique

ground infringement

Operationalizing takes out the effects violation: The afiimative operationally dehnes the

terms of the resolution. Thus, the focus of the round becomes our plan and not the general

resolutional statement. Any questions of resolutional meaning become irrelevant to the round.

Case provides sufficient ground to dejustify effects topicality: The case provides ample

disadvantage and counterplan ground such that the negative's complaint about effects topicality

is unwarranted.

Competing Interpretations Bad

1. Every round the negative will run a different topicality violation just to eliminate our case without any warrant as to how our case uniquely abuses them. Additionally,

arbitrary interpretations destroy predictability because every round will generate a

different case list which claims to be "the most predictable and educational."

2. Justifies the interpretation "only our case is topical;" this solves back any offense they can generate from a limits standard.

3. Justifies the interpretation "use the negative's case list plus our case;" this proves the arbitrary nature of their interpretation and solves back their limits and education

standards.

4. Our interpretation of the resolution is reasonable, and allows for a fair case list as well as an educational and predictable debate.

5. Literature and clash in ths round check back their predictability standard, which is

their key internal link into their terminal impacts of education and fairness. Even if they win that their interpretation limits the resolution to a more predictable case list, we will win that our case in this round was predictable enough to turn their education and fairness standards.